SAMSUNG *P28*

The product images may differ from actual product appearance.

Manual

This manual describes how to use computer as well as information on Windows, Internet, Upgrade, and Troubleshooting.

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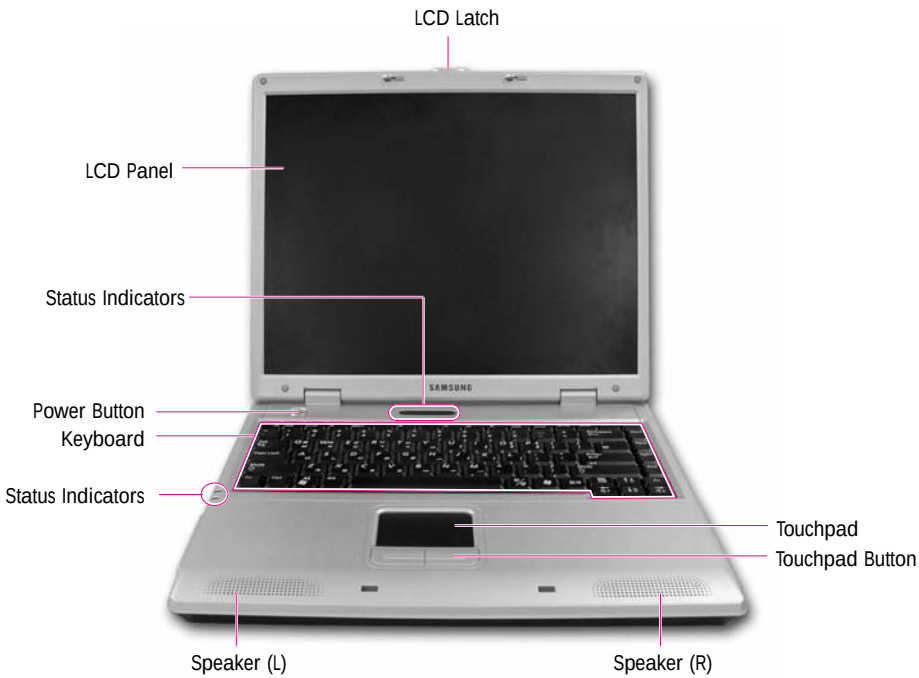
Chapter 1

Getting Started

This chapter provides basic information for using this computer. System overview and methods for general use are provided.

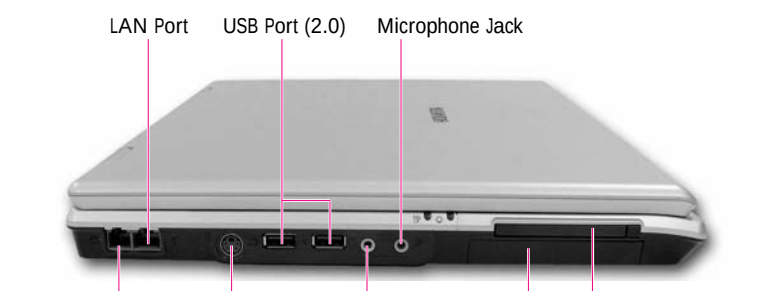
Introducing The Computer

Front View

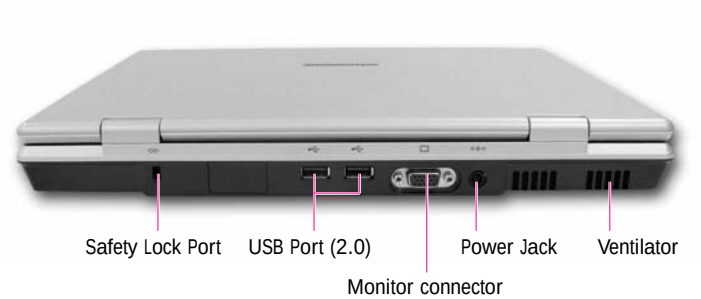


Right View

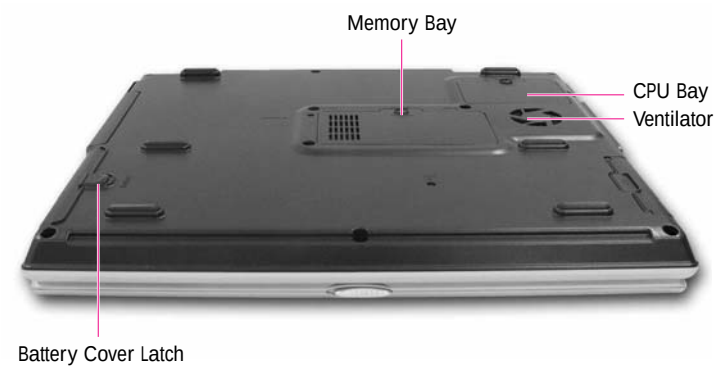
Left View



Rear View



Bottom View



Turning the Computer On and Off

Turning On

1. Insert the battery and connect the power according to the supplied Installation Guide.
2. Lift up the LCD panel and open it to a comfortable angle.
3. Press and then release the power button to turn the system on.

Turning Off

1. Click the **Start** button on the Taskbar.
2. Select **Turn Off Computer**.
3. Click **Turn Off** from the [Turn Off Computer] window.

Caution After doing so, when you turn the system on, the system examination program is executed automatically. After doing so, when you turn the system on, the system examination program is executed automatically.

Creating and Changing User Accounts

Multiple users can be registered in a single system so that each user may use their own customized working environment. Procedures to register and change user accounts are provided below.

Registering a new user

1. Click **Start** > **Control Panel**.
2. Click **User Accounts** > **Create a new account**.
3. Type a name for the new account, and click **Next**.
4. **Select the account type** and click **Create Account**.
   The new user account has been created.

Changing users

1. Click **Start** > **Log Off**.
2. Click **Switch User**.

3. In the [Windows Log On] window, select the desired **user name**.

Touchpad

Movement of the pointer (arrow) on the screen will correspond to movement made with a finger on the touchpad.

Touchpad Buttons
Two buttons below the touchpad provide identical functions to buttons of a mouse.

Click (Select Function)

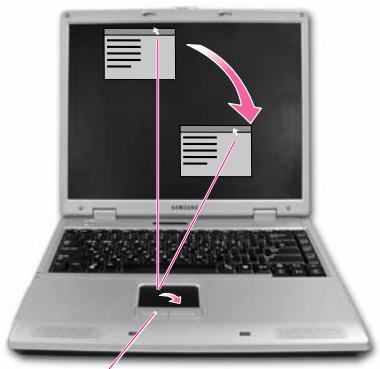
Place a finger on the touchpad, move the pointer on the screen to the icon or item to select, and tap the touchpad once. The click operation is also used to move the 'cursor' during document operations.

Double-click (Run Function)

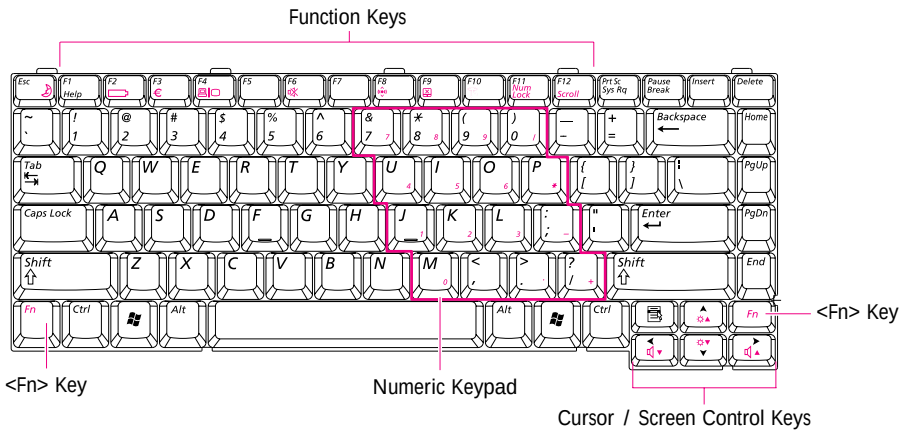
Place a finger on the touchpad, move the pointer on the screen to the item to run, and quickly tap your finger on the touchpad twice.
Or double-click the left touchpad button.

Drag (Move / Select)

Click and hold the left touchpad button over the point you wish to drag, and drag your finger to the desired location while holding down the touchpad button.



Using the Keyboard



Special Function Keys: The <Fn> key activates special functions when pressed in combination with other keys.

Fn Key Combinations	Key Name	Function
Esc	Rest	Powers the computer down into suspended mode. To escape suspended mode, press power button.
F2	Gauge	Used to check the power supply and the battery charge. 1. Power Supply Status When operating on battery power When operating on AC power 2. Remaining Battery Charge Level
F3	€	Used to type the Euro currency symbol.
F4	LCD/CRT	Switches the display between the LCD and an external display device when an external display device is connected. (P. 6-8)

Fn + Key Combinations	Key Name	Function
	Wireless LAN On/Off	Turns the wireless LAN service on and off for appropriate models. **Note** Using Wireless LAN Button(For wireless LAN installed models) Loading or unloading wireless LAN driver takes about 5 seconds. Therefore, if you turn wireless LAN on/off using the wireless LAN button, the button does not work for 5 seconds.
	Touchpad	Turns the touchpad features on and off.
	Low noise	The system operates at a lower noise level and the power LED turns on. **Caution** In low-noise mode, the operational speed of a program will be slowed down because the CPU operating at half speed, and the system may overheat if used continuously in this mode because the fan is rotating only at low speed.
	Num Lock	Enables the numeric keypad.
	Scroll Lock	Scrolls the screen up and down while the cursor position remains fixed in some applications.
	Volume Up	Increases the audio volume.
	Volume Down	Decreases the audio volume.
	Brightness Up	Turns the LCD screen brighter.
	Brightness Down	Turns the LCD screen dimmer.

Key	Key Name	Function
	Screen Control Key	Moves to the screen above or below, or moves the cursor to the beginning or end of the sentence.
	Application Key	Same function as the right button of the touchpad.

Status Indicators (LED : Light Emitting Diode)

Icon	Name	Functions
	Num Lock	Turns on when the numeric keypad is activated.
	Caps Lock	This light is on when the user has set the option for typing letters in upper case.
	Scroll Lock	This light is on when it is set to scroll the screen up and down while the cursor position does not change in some applications.
	HDD	Blinks when the hard disk drive is operating.
	Touchpad	Turns the light on if the touchpad is locked.
	Wireless LAN	The light turns on when the wireless LAN service is activated.
	Battery	Turns green - when the battery is fully charged, or when the battery is not installed. Turns amber - when the battery is being charged. Blinks - when the battery is not properly installed
	Power	Turns on - when the computer is turned on. Blinks - when the computer is in Standby mode. In low noise mode

Adjusting the LCD Brightness

There are 8 levels of LCD brightness (1:Dimmest ~ 8:Brightest).

Press <Fn>+< > or <Fn>+< > keys from the keyboard to adjust LCD brightness. When changed, the current LCD brightness is displayed on the top left corner of the LCD screen for a few seconds.

(LCD brightness icon)

Whenever you turn the system on or change the power source, the brightness level changes according to the settings.

- When operating on AC power: Brightness Level 8
- When operating on battery power: Brightness Level1

Note

Maintaining your LCD brightness settings after turning the system off and on

1. Turn on the system, and enter Setup.
2. In the **Boot** menu, change the **Brightness Control Mode** option to **User Control**.
3. Save the settings and exit Setup.

Saving the battery charge

When your computer is operating on battery power, adjusting the LCD brightness level to a dimmer level decreases the battery power consumption.

Bad pixels on the LCD

The limits of the LCD manufacturing technology allow a maximum of 10 abnormal or bad pixels, which do not affect system performance. This system may have the same level of abnormal or bad pixels as any other company's products.

Caution

Maintenance Instructions

When cleaning the LCD panel, use only computer specific cleaners on a soft cloth, and lightly wipe in one direction.

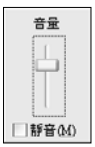
Adjusting the Volume

Using the Keyboard

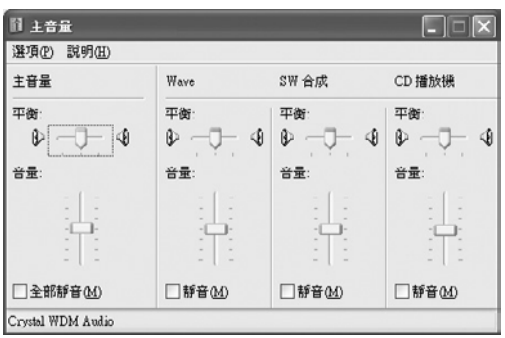
Press <Fn>+< > or <Fn>+< > keys on the keyboard to adjust the audio volume.

Using the Volume Control Program

On the taskbar, click the **Volume** ( ) icon, and adjust the slide bars.



For advanced volume control options, double-click the **Volume** ( ) icon, and adjust the settings in the [Master Volume] dialog box.



Proper Seating Posture During Computer Use

The proper seating posture during computer use is provided here. Maintaining proper posture during computer use enhances performance and prevents physical bodily harm.

If necessary, use a footrest to raise the level of your knees and ease the pressure on the thighs.

Seating Posture

- Position the chair so that the eyes are slightly higher than the display panel.
- Straighten the neck and back.
- Place the legs naturally.
- If necessary, use a cushion to provide extra back support.
- Avoid working postures that require twisting the body or neck.

Lighting

- Soft, indirect lighting is recommended.
- Position the display panel so that external light does not reflect off the screen. Use curtains, if necessary.

Work Habits

- Take periodic breaks and stretch out stiff muscles regularly.
- Look outside the window or at distant objects frequently to relieve strain on the eyes.

Chapter 2

Introducing Windows

This chapter provides basic information on using the computer's main operating system Windows.

Windows XP Basics

Windows is the computer's main operating system, which needs to be familiarized with in order for efficiently computer use.

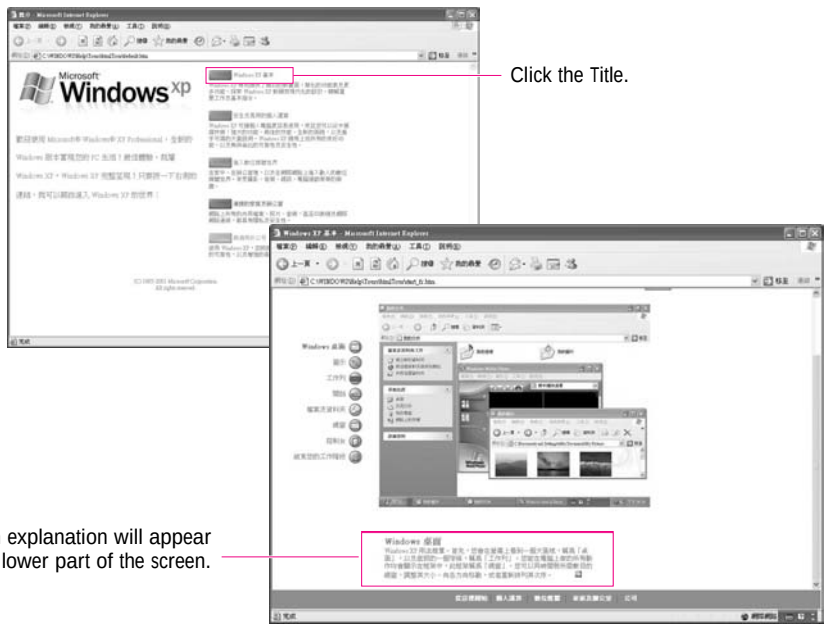
Windows XP Tour

A tour of the elementary functions provided by Windows XP.

Click **Start** > **Tour Windows XP**.

Or click **Start** > **All Programs** > **Accessories** > **Tour Windows XP**.

Click on the topics to find out about important functions of Windows XP.



Understanding the Desktop

The Desktop is the working area on the computer. It consists of the large workspace, which is more or less the entire the screen and a Taskbar at the bottom.

Start Button		Opens the Start Menu.
Taskbar		Displays programs that are currently running. Frequently used icons can be placed here.
Recycle Bin		Deleted files or folders end up here.
Language Bar		Enables switching between English/other languages text inputs and provides other text input services.

Understanding the Start Menu

The Start Menu includes everything that is required to start Windows.

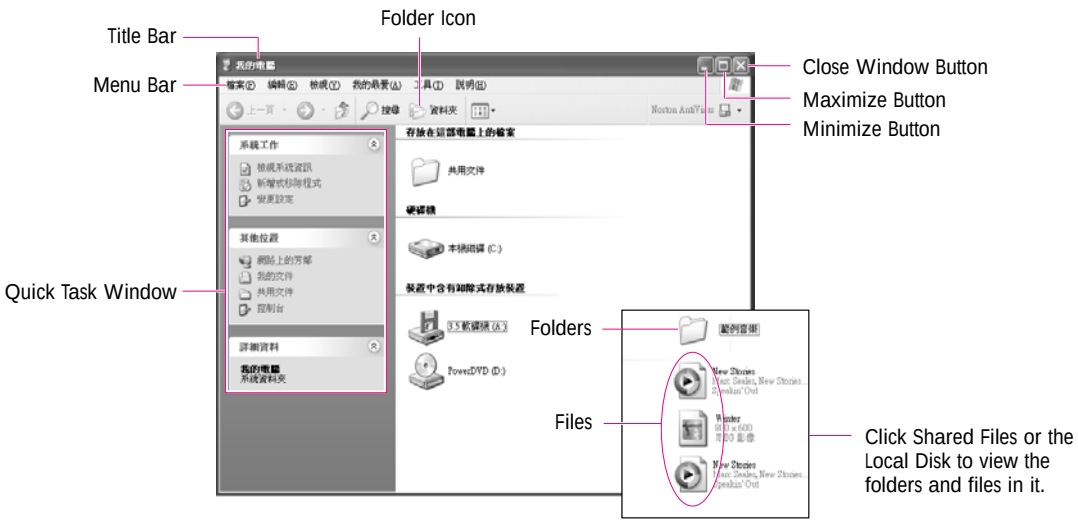
From the Start Menu it is possible to run a program, open a file, assign system users with the Control Panel, receive support by clicking Help and Support, and search desired items from computer or Internet by clicking Search.

My Computer		Displays the contents of the hard disk, the CD-ROM drive, the network drive, and floppy disks. It can also be used to search and open files and folders.
Control Panel		Enables users to configure settings on the computer.
Help and Support		Provides on-line help, information on Windows and troubleshooting.
Search		Enables users to search for information in files or the Internet.
Run		Runs programs or documents.

Understanding a Window

A window is the basic component in working with the computer. The My Computer window, which is a window for the computer's hard drive, will be used as an example here to show the basic composition of a window.

Click **Start** > **My Computer**.



Double-click the hard drive (local disk) to view internal folders and files stored in it. If the contents do not appear, click Show Contents.

Note

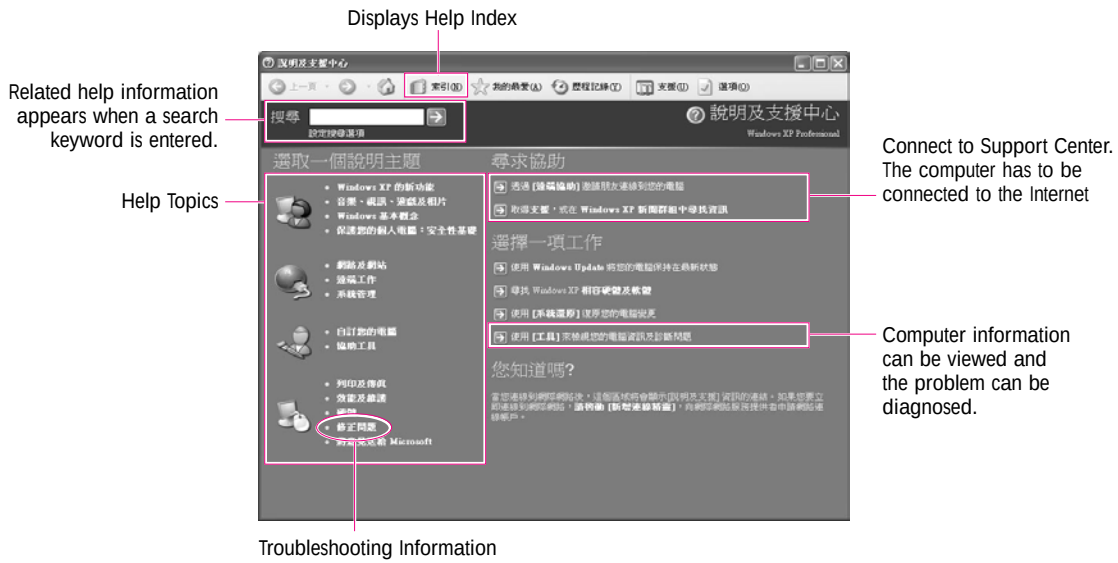
- **What is a Drive?** — A storage device in which files and folders are saved in, and read from.
- **What is a Folder?** — A folder is used to group and manage files systematically, and may include files in sub-folders. It is similar to a bookshelf.
- **What is a File?** — A file is a document or various kinds of material that is generated as a result of program operation. It is also called data.

To view the entire structure of the drive
Click the Folder Icon in the Toolbar to view the entire structure. Click again to return to the Quick Task Window.

Help and Support Center

Help and Support Center provides references and troubleshooting information regarding computer use.

Click **Start** > **Help and Support**.

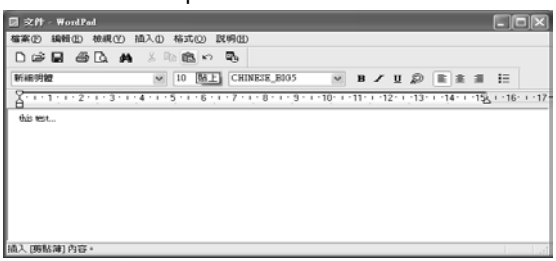


Document Operations

To create documents, WordPad or NotePad, which is included in Windows, or a separate specialized word processor program can be used, such as MS Word.
Instructions for creating documents using WordPad is provided here.

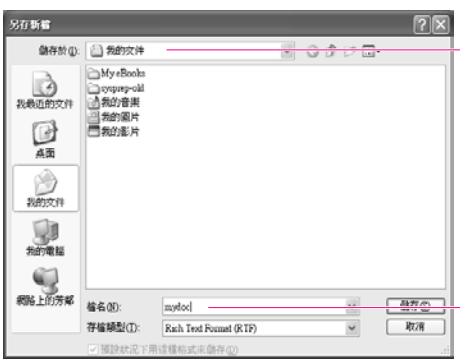
Creating a New Document

1. Click **Start** > **All Programs** > **Accessories**> **WordPad**.
2. Create and edit your document. For more information about WordPad, refer to on-line Help.



Saving a Document

1. Select **File** from the Menu, and click **Save**.
2. Click on the Save in field to specify a folder to save the file in, enter the name of the file in the File Name field, and click **Save**.



Opening a Document

1. Click **Start** > **All programs** > **Accessories** > **WordPad**.
2. Select **File** From the Menu, and click **Open**.
3. Click on the Look in field and specify the folder in which the file is saved.
4. Select the file to open and click **Open**.

Printing a Document

To print a document, connect a printer to the computer.
For more information about connecting and configuring a printer, please refer to the printer manual.

To print a WordPad document

1. Turn on the printer, and insert paper.
2. Open the WordPad file to print.
3. Select **File** from the Menu and select **Print**.
4. Click **Properties**, adjust the printer options accordingly, and click **OK**.
5. In Print window, click **OK** to print the document.

Chapter 3

Using The Computer

This chapter investigates various different functions of the computer and provides information on using the related application programs for them.

Using the CD-ROM Drive

This computer has one of the following CD drives.

- CD-ROM Drive	Reads a CD.
- DVD-ROM Drive	Reads a CD/DVD.
- CD-RW/DVD-ROM Combo Drive	Read a CD/DVD, and writes data onto a CD.
- DVD Dual Drive	Read CD/DVD, and writes data to CD/DVD. Supports DVD+R, DVD-R, DVD+RW, and DVD-RW only for the DVD recording format.
- DVD-SuperMulti Drive	Read CD/DVD, and writes data to CD/DVD. Supports DVD-RAM, DVD+R, DVD-R, DVD+RW, and DVD-RW only for the DVD recording format.

To Run a CD

1. Press the eject button on right side of the CD drive.
2. When the tray slides out, place a CD onto it and push down until it clicks.

3. Push the CD tray in gently. The CD will run automatically.

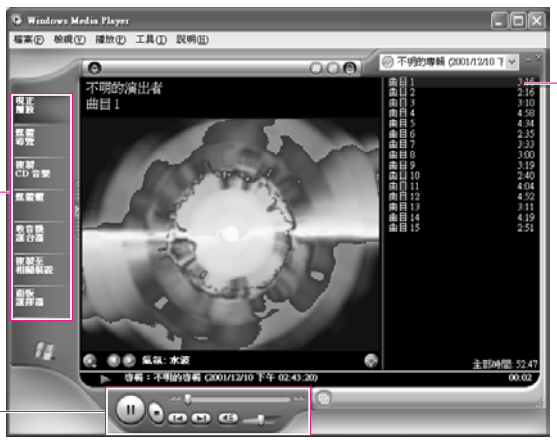
Note To eject a CD when the CD drive is out of order or the system is turned off, unfold a paper clip, and insert the unfolded end of the clip into the hole ( ) and press until the CD tray opens.

Caution
- To clean a CD or DVD title, clean the disc with a soft clean cloth by wiping from the center outwards.
- Do not eject the CD while the Status Indicator is on.

Using the Windows Media Player

The Windows Media Player enables the user to configure and play video and audio files from the computer or the Internet.

Click **Start** > **Windows Media Player**.
Or click **Start** > **All Programs** > **Accessories** > **Entertainment** > **Windows Media Player**.



Caution If you maximize or restore down the window while playing a media such as an audio CD on Media Player, the screen may not displayed properly for a moment.

To Play an Audio CD

1. Insert an audio CD into the CD drive, and a list of all available players is displayed automatically.
2. Select **Windows Media Player**, and click **OK** to play the audio CD.

To Play a Video CD

1. Insert a video CD into the CD drive.
2. When a video window appears, double-click the **MPEGAV** folder.
3. Double-click the **DAT** file.
4. When a warning window appears, click the **Open with** button.
5. In the new window, click **Select Program from List** and click **OK**.
6. Select the **Windows Media Player**, and click **OK**.
   The video will start playing.

To Write Data in CD

You can copy data to a blank CD or create an audio CD.

Note : An additional CD writing program is supplied in an additional CD.

1. Insert a blank CD into the CD-RW drive.
2. Click **Open Writable CD Folder** and click **OK**. The CD-ROM drive window appears automatically.

3. Click **Start** > **My Computer**.
4. Select, drag and drop folders or files to copy onto the CD-ROM drive window. Click **Write Files to CD** in the CD-ROM drive window.

5. When the CD Write Wizard appears, enter the **CD label**, and click **Next**. The data will begin copying.
6. When copying is completed, a message 'completed' will appear and the CD-ROM drive will open automatically.

Note

For more information on copying CDs
Click Start > Help and Support. Enter [CD copy] in the search field, and click the Search button.

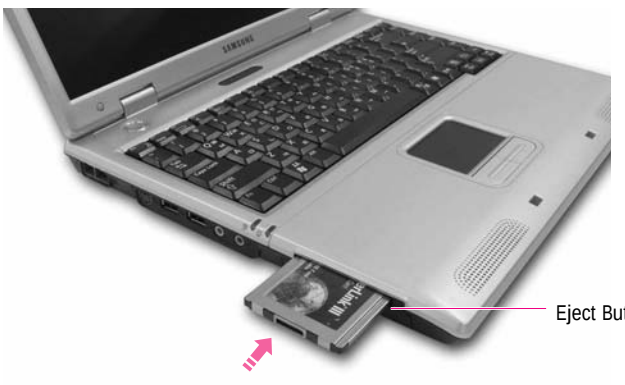
To create an audio CD
Run the Windows Media Player, click the Help menu, and select [Using Windows Media Player > Using CDs > Creating your own CDs > To create your own CD].

Working with PCMCIA Cards

Various different functions can be added by inserting PCMCIA cards into the system. This system supports 16 / 32 bit, type I or II PCMCIA card types.

Caution **Before using the PCMCIA slot, remove the slot protector.**
Push the eject button of the PCMCIA card slot once to pop it out. Push the button again to eject the slot protector.

1. Insert a card into the PCMCIA card slot on the side of the system.



2. When a card is inserted, Windows automatically installs the necessary driver for the card. If no available driver can be found by Windows, the driver has to be installed using the disk supplied with the card.

Note **To remove PCMCIA card**

a. Double-click Safely Removes Hardware icon ( ) in Taskbar.
b. Select the appropriate PCMCIA card and click Stop button.
c. When 'Safe to remove Hardware' window appears, click OK.
d. Press Eject button at PCMCIA card slot once, then the button pops out.
e. Press the projected button to eject the PCMCIA card.

Caution You cannot use a ZV card and a PCMCIA III card through the PCMCIA card slot of the system.

Using EasyBox

Use EasyBox program to make use of Windows' complicated function easily andconveniently.

Learn about EasyBox

Double-click the **EasyBox**( ) icon on the desktop. (Or select **Start > All Programs > Samsung > EasyBox > EasyBox**.)

- **System** : System management features are available, including disk defragmenter, removing unnecessary files/folders, computer scheduling and system recovery.
- **BIOS** : In windows-based mode, you can recover the BIOS defaults and change the boot sequence.
- **Desktop** : Desktop management features include changing the font size, executing a magnifier function, the start menu settings and managing the quick launch icons on the taskbar.
- **Security** : Here you can configure the security settings supported by Windows XP SP2. And you can change the configuration of the firewall settings, Windows automatic updates and blocking pop-ups when connected to the Internet.
- **Plus Tip** : This is a collection of additional Windows functions that are useful for system management. (Offering shortcut descriptions of Windows, configuring network sharing and opening local folder sharing, etc.)

Using EasyBox

Security management function will be used as an example here to show the function of Easybox

Configuring Firewall

The Windows Firewall prevents unauthorized users from gaining access to your system via the network or the Internet.

1. Click **Start > All Programs > Samsung > EasyBox > EasyBox**.
2. Click **Security** from the top menu bar.
3. Select **Windows Firewall Settings** from the Security menu on the left.
4. Select a firewall level.
5. Click **Apply**.

Click the User Setting button for advanced features, including exceptions and permissions.

Using Samsung Smart Screen

Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

1. Click **Start > All Programs > Samsung Smart Screen > Samsung Smart Screen**.

Note

When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

2. Samsung Smart Screen appears. When you run the program for the first time, water drop image is displayed.

Click a water drop to open and close the group.

3. To move an icon, click a water drop to open it, then drag an icon to another water drop.

Note

To return to Windows desktop

Right-click on Samsung Smart Screen and click Windows desktop. Windows desktop is displayed.

To return to Samsung Smart Screen, double-click ( ) icon on the taskbar.

To change background or skin

Right-click on Samsung Smart Screen and select desired item.

Using Samsung Theme

Samsung Theme is a program that enables a user to easily switch a theme (desktop, logon screen and sound effect).

Double-click the **Samsung Theme** ( ) icon on the desktop.

(Or select **Start > All Programs > Samsung Software > Samsung Theme > Samsung Theme**.)

Help button

Close button

Move the mouse pointer over Samsung Theme item, then the Samsung Theme will be displayed below.

- **Samsung Theme** : Switches to Samsung Theme (desktop, logon screen and sound effects on booting).
- **Windows XP Theme** : Switches to the Windows XP default Theme.
- **Back** : Restores the theme to its previous status.

Chapter 4

Connecting to the Internet

This chapter provides instructions on connecting to the Internet.

Connecting to the Internet

The following options show many ways to connect to the Internet. An appropriate option should be selected depending on the user's working environment and the user's system specifications.

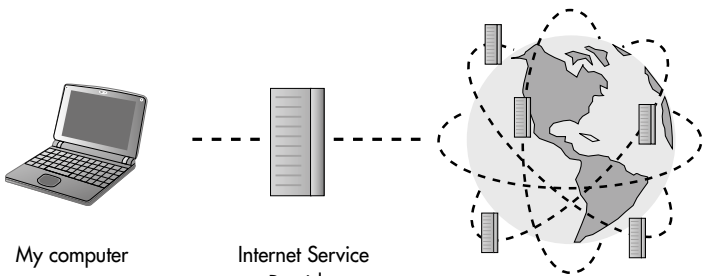
Option 1 Connecting using a modem and a telephone line.
Service has to be applied for and received from an Internet Service Provider (ISP) through an Internet service account.

Option 2 Connecting using a High-speed communication network service, such as ADSL and VDSL.
Service has to be applied for and received from a High-speed communication network service provider. Receiving Internet service may require support from specific devices. Contact the service provider for details.

Option 3 Connecting using a wired LAN
Use a LAN cable that is already installed in your office or building,

Option 4 Connecting using a wireless LAN
The Internet can be accessed without a telephone line or a LAN cable if there is a Wireless LAN AP (Access Point) nearby.

Note : The Wireless LAN function is optional.



Connecting to the Internet Using a Modem

1. Connect the telephone line to the modem port. Do not use a digital telephone line.

2. To connect the modem to the Internet, and use e-mail, you have to apply to an Internet Service Provider (ISP) for an Internet service.

Note

- For more account information, please contact your ISP.
- Ask your ISP about Internet fees and the disconnection procedure. If the Internet connection is not disconnected properly, additional telephone charges may incur.

Configuring the Network Environment Settings for Wired LAN Connections

A wired LAN environment is an environment where you can connect to the Internet using the company's LAN or with a broadband modem.

1. Connect the network (LAN) cable to the LAN port of the system.

2. Click **Start** > **Control Panel**.
3. Select **Network and Internet Connections** in the [Control Panel] window.
4. Click **Network Connections** in the [Network and Internet Connections] window.
5. In the [Network Connections] window, point the mouse pointer to Local Area Network and click the right touchpad button. Select **Properties** from the popup menu that appears.

6. In the General tab of the [Local Area Connection Properties] window, check that the connecting device field includes the **Broadcom 440x 10/100 Integrated Controller** driver.

7. In the “This connection uses the following items” field, select **Internet Protocol (TCP/IP)**, and click **Properties**.

Note In the above screen, necessary network components can be added by clicking the Install button.

8. Enter the system’s IP and DNS server addresses on the General tab of the [Internet Protocol (TCP/IP) Properties] window. If DHCP is used, click “Obtain an IP address automatically” and “Obtain DNS server address automatically” on the General tab.

Note IP addresses and other information necessary for configuration can be obtained from the network administrator.

9. Once all of the information is entered in the [Internet Protocol (TCP/IP) Properties] window, click **OK** to finish.

Using Samsung Network Manager

Use Samsung Network Manager to configure network setting.

Using the program, you can do the following.

- You can save network settings (including IP address) according to network places such as office and home. When you change places, simply select a network place and the network settings will be automatically changed accordingly.
- You can easily find out your current IP.

■ To configure network setting

1. Connect LAN cable to the computer's LAN port.
2. Double-click Samsung Network Manager icon on the desktop.
   Or click **Start > All Programs > Samsung Network Manager > Samsung Network Manager**.
3. When you are using DHCP, available IP's are displayed in the status dialog box. Click **Change**.

4. Click **Add**, click **Choose Icon** and select an icon. Enter a place name in **New Name** field and click Ok.

5. New place icon is displayed and full dialog box appears. Check your IP and click **Close**. Network setting is saved.

Note

To configure network setting of some place other than current place, click the place icon and configure each network device. If you are using DHCP, select 'DHCP' check box and click Save.

If you are using a static IP, clear 'DHCP' check box, enter appropriate network setting and click Save.

Ask ISP or network administrator for IP address.

To change network places

You can change network places as below.

1. Connect LAN cable to the computer's LAN port, and double-click **Samsung Network Manager** icon on the desktop.

Note

If you used static IP in previous place, previous static IP is displayed in the status dialog box.

2. Click **Change**, select a place icon then click **Change**.

3. On "Do you want to change the location setting?" dialog box, click Ok.
4. When the network place is changed, corresponding place icon is displayed in color and full dialog box appears. In the right area of full dialog box, network setting is displayed.
5. Click **Close** to close the dialog box.

Using Both DHCP and Static IP Simultaneously.

When you are alternatively using networks with either DHCP or static IP addressing, you can use alternative settings that enable simultaneous configurations of DHCP and static IP to use both of the network connections without reconfiguring.

Note : This function is provided only when your operating system is Windows XP.

1. Click **Start > Control Panel > Network and Internet Connections > Network Connections > Local Area Connection**, press the right button of the touchpad, and then select Properties.
2. Select the **Internet Protocol (TCP/IP)** item, and then click **Properties**.
3. In the **Alternate Configuration** tab, click **User configured**, and then enter the appropriate values for the following:

   (IP address, Subnet mask, Default gateway, Preferred and alternate DNS server, Preferred and alternate WINS server)

4. When the configuration has been completed, click **OK**.
   Now you can connect to both networks using DHCP and static IP respectively.

Configuring the Network Environment Settings for Wireless LAN Network (WLAN)

A wireless network (Wireless LAN) environment is a network environment that enables communication between multiple computers at home or a small-size office through wireless LAN devices.

Using the wireless network connections between the systems, you can use normal network functions such as sharing of files, folders and printers. Using computer-to-computer network (ad hoc) connections, you can access the Internet through a computer connected directly to the Internet even if your computer is not directly connected to the Internet.
(See Page 4-23. Using Network Services)

Note

The description in this section concerns the Agere Wireless MiniPCI Card (hereafter referred to as an Agere 11b card), the SAMSUNG SWL2700M b/g miniPCI WLAN Adapter (hereafter referred to as a Samsung 11g card) and Atheros Wireless Network Adapter (hereafter referred to as an Atheros 11g card) devices.

A wireless LAN interface is an optional device that you can select when you purchase this product. You can connect to the Internet over a wireless connection when your computer has a wireless LAN (WLAN) device.

To view the installed wireless LAN card, click Start > Control Panel > System > Hardware tab > Device Manager.

The actually displayed images may differ from the figures shown in this section according to the installed device and the connection state.

Wireless network connections can be classified into two categories.

1) Access Point

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. (See Page 4-10, 'Connecting to an Access Point (AP)')

Note

What is an Access Point (AP)?

An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

2) Computer–to-computer (ad hoc)

This is also called a peer-to-peer or ad hoc network.
In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. (See Page 4-11, 'Connecting to computer-to-computer networks (peer-to-peer or ad hoc)').

Connecting to an Access Point (AP)

This section describes how to connect to an AP. You can use the network when you are connected to an AP.

Note For more detailed information such as the network key (encryption key), ask your network administrator.

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

2. Select an AP (E.g. Test) to connect to and click **Connect**.
   When the network key dialog box appears, enter the network key and click **Connect**.

Note

When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when Connected in AP is displayed, and you can access the network.

Note **Checking the connection status.**
Move the mouse pointer over the **Wireless Network Connection** ( ) icon on the taskbar, and the connection status is displayed.

Connecting to computer-to-computer networks
(peer-to-peer or ad hoc)

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules.

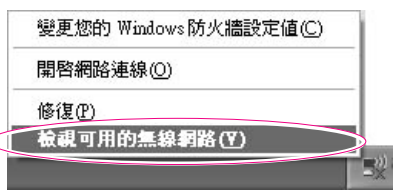
Using this method, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (Refer to "Sharing an Internet connection through a wireless network" (P.4-29).)

You can connect by completing the following steps:

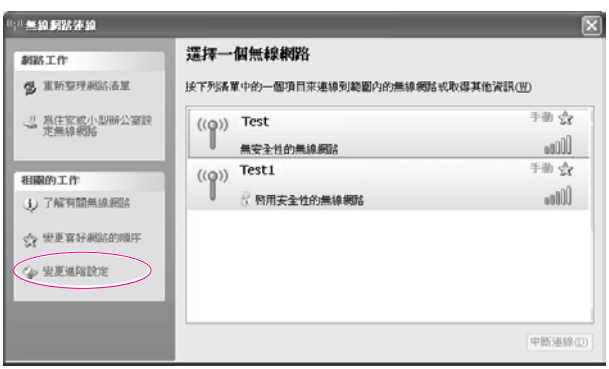
- ▶ Step 1. Set up a computer-to-computer network on a computer.
- ▶ Step 2. Connect to the configured computer from other computers.

■ Step 1. Setting up a computer-to-computer network

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.



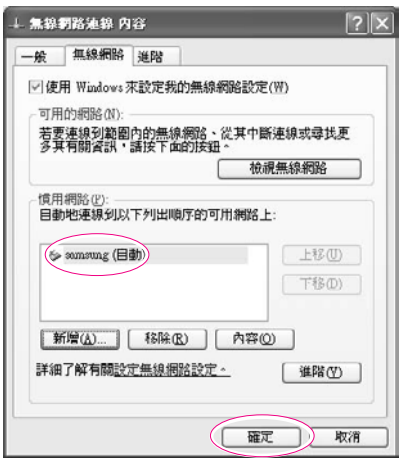
2. Click **Change the order of Preferred Networks.**



3. On the Wireless Networks tab, click **Advanced**.
4. Clear '**Automatically connect to non-default network**' check box, if it is selected.
   Select '**Computer-to-computer (ad hoc) networks only**', and click **Close**.
5. In the Wireless Networks tab, click **Add**.
6. Enter the network name (e.g. samsung), and unselect '**The key is provided for me automatically**'. Enter the encryption key in the Network key field, and click **OK**.

Note To prevent a network connection from an unauthorized user, it would be better to configure a network key (encryption key). A network key consists of 5 or 13 alphanumeric characters (e.g. magic), or of 10 or 26 hexadecimal numbers (a hexadecimal number is represented by numbers '0' to '9' or letters 'a' to 'f').

7. Check that the configured network name (e.g. samsung) is in the 'Preferred networks item', and click **OK**.

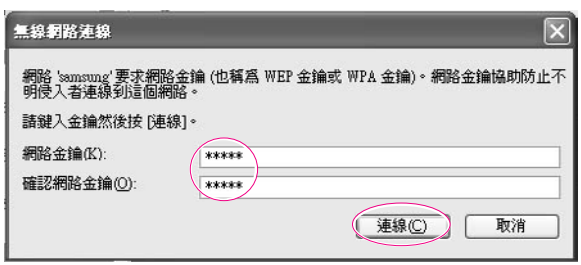


Now your wireless network setup has been completed.

■ Step 2. Connecting to the configured computer

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.
2. Select the wireless network name (e.g. samsung) specified in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)", and click **Connect**.

3. Enter a cryptographic key in the network key box and click Connect.

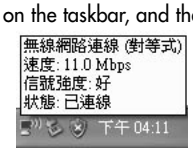


Note If the network key is not configured in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on P. 4-11, just click **Connect**, without any keystrokes.

When connected to the wireless network, the system displays **Connected** in the selected network of the Network Connection window.

Note **Checking the connection status.**

Move the mouse pointer over the **Wireless Network Connection** ( ) icon on the taskbar, and the connection status is displayed.



Wireless Network Setup Using the Wireless LAN Setup Program (for an agere 11b card)

You can use a wireless LAN by using a wireless LAN configuration program (Client Manager) provided separately.

Note The following description contains information about Agere 11b wireless LAN cards. For information about Samsung 11g or Atheros 11g wireless LAN cards, refer to the corresponding pages.

To use a wireless network, complete the following procedures.

- Step1. Install the Client Manager program.
- Step2. Construct a wireless network.

Note To connect to a peer-to-peer wireless network, complete the following procedures on both target computers.

Step 1. Installing the Client Manager Program

Install the "Client Manager" program from the System Software CD to the computers to be connected to the network.

Step 2. Constructing a Wireless Network

1. Double-click the **wireless LAN program** ( ) icon on the Taskbar. (Or, click **Start > Programs > Wireless LAN > Client Manager**)
2. In the Action menu, click on **Add / Edit Preferred Profiles**.
3. Select a Network Name from the Available networks list and then click **Edit**.

Note When a network does not appear, click on Refresh.

An access point is represented by the ( ) icon and a peer-to-peer wireless network is reepresented by the ( ) icon.

4. In the Wireless Network Properties window, enter the name in the Profile Name field.

5. When an encryption key is configured for an access point or peer-to-peer network, select **Enable Encryption** in the wireless network key (WEP) field, enter the corresponding encryption key and then click **OK**.

Note

For information about the encryption key (WEP key) of your AP, ask your AP administrator or network administrator.
A network key consists of either 5 or 13 alphanumeric characters(e.g. magic), or 10 or 26 hexadecimal(0-9 or A-F).

6. When your computer is connected to an access point, the connection ( )icon appears in front of the added wireless network connection profile name.

Note

When a profile is created, the new profile is added to the My Preferred Network Profiles list. Double-clicking the profile displays Activate or Edit a Preferred Profile window. Select Activate Profile and the click on OK to make a connection using the profile.

To create an Ad Hoc network

To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

Note

A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. Click on **Add / Edit Preferred Profiles** in the Action menu.
2. Click on **Add** in My Preferred Network Profiles.
3. Select **Create a new network profile** and click **OK**.
4. Enter a **Profile Name** and **Network Name.**

   To create a new Ad hoc network, select a Peer-to-Peer group in Create Network. In this case, you can select the channel to use.

Note

What is a network name (SSID)?

Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

5. In the Wireless network key (WEP) field, select **Enable Encryption** and enter the encryption key to be used for the network and then click **OK**.

   To connect to the access point, enter the network encryption key configured in the access point and then click **OK**.

Note

It is recommended configuring data encryption for security purposes when creating an Ad Hoc network profile. For more information about security configuration, refer to the Security Setting of connection to an Access Point or the online Help.

6. When a profile has been created, the new profile is added to the My Proferred Network Profiles list. To connect to the Ad Hoc network, select and double-click on the **Profile Name**. Then the Activate or Edit a Preferred Profile window appears. Select **Activate Profile** and then click **OK**.

Wireless Network Setup Using the Wireless LAN Setup Program (for a samsung 11g card)

You can use a wireless LAN by using a wireless LAN configuration program (Magic Lan) provided separately.

Note The following description contains information about Samsung 11g wireless LAN cards. For information about Agere 11b or Atheros 11g wireless LAN cards, refer to the corresponding pages.

To use a wireless network, complete the following procedures.

- Step1. Install the MagicLAN5 utility program.
- Step2. Construct a wireless network.

Note To connect to a peer-to-peer wireless network, complete the following procedures on both target computers.

Step 1. Installing the MagicLAN5 Utility Program

Install the "MagicLAN5 Utility" program from the System Software CD to the computers to be connected to the network.

Step 2. Using the MagicLAN5 Utility

Double-click the **wireless LAN program** ( ) icon on the Taskbar. (Or, click **Start > Programs > MagicLAN5 > MagicLAN5 Utility > MagicLAN5 Utility**) Configure the wireless network settings through the MagicLAN5 Utility according to the following procedures.

To connect to an Access Point

To connect to an access point or to connect to an already existing Ad Hoc network, refer to the following instructions. (To create a new Ad Hoc network, refer to the following instructions about To create a computer-to-computer (Ad Hoc) network.)

1. Double-click **an access point (or Ad Hoc network)** name from Available Networks or click on **Configure**.

Note If your desired network does not appear, click Refresh.

Note An access point is represented by the ( ) icon and an Ad Hoc network isrepresented by the ( ) icon.

2. Enter **Profile Name** to use for the network connection.
3. In the Security window, select either **Set Security Method** according to the settings of the access point (or Ad Hoc network).

   If Set Security Method has been selected, click on Configure to configure detailed security settings.

Note The network authentication, the encryption type and the password of an access point are configured by the access point management program. To acquire security information, check the access point security settings or ask your wireless network administrator.

WEP Key Settings:

- Data Encryption: The IEEE 802.11 WEP (Wired Equivalent Privacy) standard provides two security levels, a 64-bit key (sometime a 40-bit key) and a 128- bit key.
- The key type is either a hexadecimal number or in lower case ASCII.
- To use lower case ASCII: Select Use Password to activate this function. Enter 5 alphanumeric characters (0-9, a-z or A-Z) (64-bit) or 13 alphanumeric characters (0-9, a-z or A-Z) (128-bit).
- To use a hexadecimal number: In the WEP key field, enter 10 hexadecimal digits (0-9 or A-F) (64-bit) or 26 hexadecimal digits (0-9 or A-F) (128-bit).

Note In the Ad Hoc network, WEP key is supported only.

4. Click **OK**.
5. When a profile is created, the new profile will be displayed in the Profile list. Double-clicking a profile connects to the network using that profile..

▶ To create a computer-to-computer (Ad Hoc) network

To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

Note A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. In the Profile list window, click **New**
2. Enter a **Profile Name and the Network Names**.

Note **What is a network name?**

Network name is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

3. In the Advanced window, configure **the Network type**.

Note **Network mode:**

Ad- Hoc - Select to connect to an Ad Hoc network.
Access Point - Select to connect to an access point.

4. In the Security window, select either **Set Security Method** for the Ad Hoc network to connect. To connect to an access point, select either Set Security Method according to the settings of the access point.

Note It is recommended configuring a WEP Key for security purposes when creating an Ad Hoc network profile.

5. When a profile has been created, the new profile appears in the Profile list of the Profile management tab. Double-clicking a profile connects to the network using that profile.

Wireless Network Setup Using the Wireless LAN Setup Program (For an Atheros 11g card)

You can use a wireless LAN by using a wireless LAN configuration program (Atheros Client Utility) provided separately.

Note The following description contains information about Atheros 11g wireless LAN cards. For information about Agere 11b or Samsung 11g wireless LAN cards, refer to the corresponding pages.

To use wireless network connection, complete the following procedures.

- Step1. Install the Atheros Client Utility program.
- Step2. Construct a wireless network.

Note To construct a small office wireless network (peer-to-peer) with two computers, you have to setup the two computers identically according to the following procedures.

■ Step 1. Installing the Atheros Client Utility Program

Install the Atheros Client Utility program included on the System Software CD-ROM onto the computers to be connected to the network.

■ Step 2. Using the Atheros Client Utility

Right-click the wireless LAN program ( ) icon of the Taskbar and select Open Atheros Client Utility.

(or select **Start > All Programs > IEEE 802.11 WIRELESS LAN > Atheros Client Utility)**

- **To Connect to an Access Point**

  To connect to an access point or existing computer-to-computer (Ad Hoc) network, refer to the following procedures. (To create a new computer-to-computer network, refer to the following "To create computer-to-computer (Ad Hoc) network" section.)

1. In the Profile Management tab, click on Scan to search for available wireless networks.
2. Double-click or select the name of an access point (or a new computer-to-computer network) in the Network Name (SSID) field and click on Enable.

Note

If the network does not appear, click on Refresh.

An access point is represented by the ( ) icon, and a small office wireless network is represented by the ( ) icon.

3. Enter a profile name to be used in the Network Connections.
4. Select one of the Security Settings set for the access point (or computer-to-computer network) to connect to in the Security window. Click on the Settings to set detailed security options for the selected Security Setting.

Note

The network authentication, encryption type and password of the access point are set through the access point management program. For security information, view the access point security settings or ask your wireless network administrator.

WEP Key Setting:

Data Encryption : IEEE 802.11 WEP (Wired Equivalent Privacy) standard provides 2 security levels: 64-bit key (sometimes 40-bit) and 128-bit key encryption. Key types include hexadecimal numbers and ASCII characters.

For ASCII : Click Use Encryption to enable the encryption feature.
Enter 5 (for 64-bit) or 13 alphanumeric (0-9, a-z ~ A-Z) characters (for 128-bit).

For hexadecimal : Enter 10 (for 64-bit) or 26 hexadecimal (0-9, A-F) characters (for 128-bit) in the WEP key field.

A computer-to-computer network only supports WEP keys.
In addition, you can set a 152-bit key (32 characters for hexadecimal and 16 characters for ASCII) for the connection to an Atheros Access Point.

5. Click the **OK** button and then click the **OK** button in the Profile Management window.
6. When a new profile is created, the profile appears in the list of the Profile Management tab and the connection to the corresponding profile starts.

- **To create a computer-to-computer (Ad Hoc) network:**
  To create a new computer-to-computer (Ad Hoc) or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

Note A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. In the Profile Management window, click on **Create**.
2. Enter a profile name in the Profile Name field.
3. Enter a network name to be connected with SSID1.

Note **What is a Network Name?**
Network name is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

4. In the Security window, select either that the WEP Key to be used for the computer-to-computer is to be created or Do Not Use.

   To connect to an access point, select one of the Security Settings set for the access point.

5. Set the network type in the Advanced window.

Note Network Mode:
Ad Hoc - Select to connect to a computer-to-computer (Ad Hoc)
Infrastructure - Select to connect to an access point.

6. When a new profile is created, the profile appears in the list of the Profile Management tab and the connection to the corresponding profile is started.

Using Network Services

While the computer is connected to the network, you can use network services to share files, folders, and printers. Using computer-to-computer wireless networks, you can access the Internet through a computer that is connected to the Internet even if your computer is not directly connected to the Internet.

Note Network services are provided for the computers that are connected to the network through wired or wireless network connections. (See Pages 4-4, 4-9, **Configuring Network Environment Settings**)

Sharing files or folders

This section describes how to share files and folders between computers connected to the network.

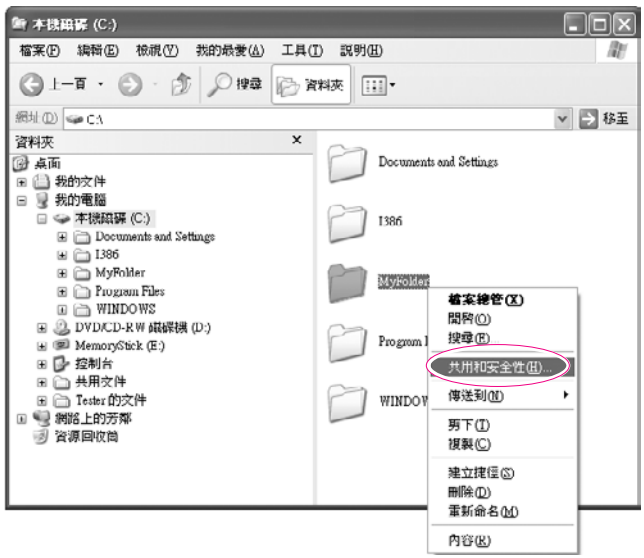
To share files, complete the following procedures:

- Step 1. Configuring the sharing of files and folders on a computer.
- Step 2. Accessing shared files and folders from another computer.

Caution When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.
Configure a file sharing network only when the network is secure, and do not share important data.

Step 1. Configuring Sharing

1. Right-click the target file or folder to share in **My Computer**, and select **Sharing and Security**.



2. Click '**IF you understand the security risks but want to share files without running the wizard, click here**'.

Note It has the same security effect as that of the '**Network Setup Wizard**'. This screen does not appear if Internet Sharing Network Wizard has been installed in the computer-to-computer wireless network environment.

3. Select '**Just enable file sharing**', and click **OK**.
4. In the 'Network sharing and security' field, select '**Share this folder on the network**', enter the share name, and click **OK**.

Caution Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

The file and folder sharing configuration has been completed.

Step 2. Using Shared Files or Folders

This section describes how to access shared files or folders if your computer is a member of the same workgroup.

1. Click **Start > My Computer**. Under **Other Places**, click **My Network Places** in your computer.
2. Click '**View workgroup computers**', and click the desired computer to access the shared file.

Note **If your computer is a member of another workgroup:**

1. Click **Other Places > Microsoft Windows Network**.
2. Click the desired workgroup.
3. Click the desired computer to display the shared files or folders.

Sharing Printers

This section describes how to share a printer between computers connected to a network.

To share a printer, complete the following procedures:

- Step 1. Configure printer sharing in the computer connected to the printer.
- Step 2. Add and use the shared printer in other computers on the network.

Step 1. Configuring Printer Sharing

1. From the computer connected to the printer, click **Start > Printers and Faxes**.
2. Right-click the printer you want to share, and click **Sharing**.

3. Select '**Share this printer**', enter a share name for the shared printer, and click **OK**.

4. In the Printers and Faxes window, you will find the printer icon has been changed to another icon on a hand.

■ Step 2. Adding and Using a Shared Printer

1. From a different computer that wants to use the shared printer, click **Start > Printers and Faxes**.
2. Click **Add a printer**.
3. In the **Add Printer Wizard**, click **Next**.
4. Select '**A network printer, or a printer attached to another computer**', and click **Next**.
5. Select '**Browse for a printer**', and click **Next**.
6. Select the workgroup or computer, select the desired printer, and click **Next**.

If you cannot find the desired printer, try again after a while.

7. Read the warning about a shared printer, and click **Yes** to install the shared printer.
8. Select **Yes** for 'Do you want to use this printer as a default printer?', and click **Next**.
9. Click **Finish**.
10. When the printer sharing configuration has been completed, the shared printer appears in the Printers and Faxes window.

Now you can print using the shared printer even if your computer is not directly connected to a printer.

Sharing an Internet connection through a wireless network

By connecting your computer to another computer, which is connected to the Internet over a wired connection, through a wireless network (Peer-to- Peer), you can access the Internet from your computer.

Note

- To share an Internet connection, the computers should be connected to a computer-to-computer (peer-to-peer) wireless network.
  (See Page 4-11, 'Connecting to computer-to-computer networks')
- Also, one of the computers has to be connected to the Internet (external network).
- The description for Sharing Internet access is for the operating system Windows XP Service Pack 2.

To share an Internet connection, complete the following procedures:

- Step 1. Configuring a Internet connection sharing from the computer connected to the Internet.
- Step 2. After completing the shared Internet connection configuration, check that the other computers can access the Internet through the shared Internet connection.

■ Step 1. Configuring Internet Sharing

Configuring a shared Internet connection on the computer connected to the Internet.

1. Click **Start > Control Panel > Network and Internet Connections > Network Connections**.
2. Right-click on the device connected to the Internet, the external network, and select **Properties**.

Note

- If the computer is connected to the Internet through a wired LAN, select 'Local Area Connection'.

3. In the **Advanced** tab, select '**Allow other network users to connect through this computer's Internet connection**', and click **OK**.

■ Step 2. Checking the Shared Internet Connection

When the Internet connection sharing configuration has been completed, the network icon in the Network Connections window is displayed as follows:
Click **Start > Control Panel > Network and Internet Connections > Network Connections**.

- A computer connected to the Internet.

- A computer sharing the remote Internet connection (other computer).

If the icon does not appear after a long time, restart the computer.

Note Computers on the network can access the Internet through the shared Internet connection only when the computer connected to the Internet is turned on.

Chapter 5

System Management

This chapter provides information on efficient computer management.

Managing Power

Use Power Options to save power consumption. You can switch Standby Mode while you are not using your computer or configure the system components to shut it down on a specified time.

Specifying Power Save Time

You can specify Turn Off Monitor, Turn Off Hard Disk, System Standby Mode, and Maximum Power Save Mode.

Select **Start** > **Control Panel** > **Performance and Maintenance** > **Power Options** > **Power** Schemes tab. Then specify time in each item and click OK.

Note

By default, the power scheme is configured to SAMSUNG mode. SAMSUNG mode extends the battery life and optimizes the Intel Speedstep function. Since the CPU power consumption is automatically optimized to conserve power when the computer is operating on battery power, an application may be executed slower than when it is operating on AC power.

To use the SAMSUNG mode after reinstalling Windows, install the PowerCFG program using the system software CD.

Monitor Off
The LCD display goes into Power-Saving mode after the specified period of time.

Hard Disk Off
The Hard Disk goes into Power-Saving mode after the specified period of time.

Standby Mode
If the computer is not used for the specified period of time, the monitor and hard disk drives are turned off to reduce power consumption.

Hibernation Mode
Saves the current working status onto the hard disk and turns the computer off. Pressing the Power button restores the computer to the previous working status.

Note

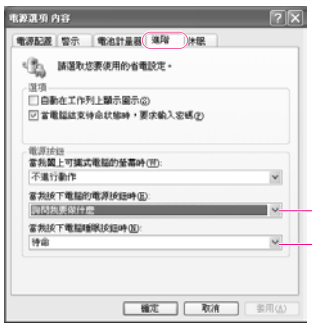
Press Power button to use computer again in Standby Mode or Hibernate Mode.

You can schedule your system for shutdown, hibernation or standby modes by clicking System > Computer Scheduling of the EasyBox program (P. 3-8).

Using the Power button

You can configure the function of the power button.

Click **Start** > **Control Panel** > **Performance and Maintenance** > **Power Options** and select the **Advanced** tab.



Configure the Power button function.

Configure the <Fn>+< > function.

Caution When the Power button is configured to put the system into Power-Saving Mode, manually shutting down the computer requires the Power button to be pressed and held for more than 4 seconds.

Using the Battery

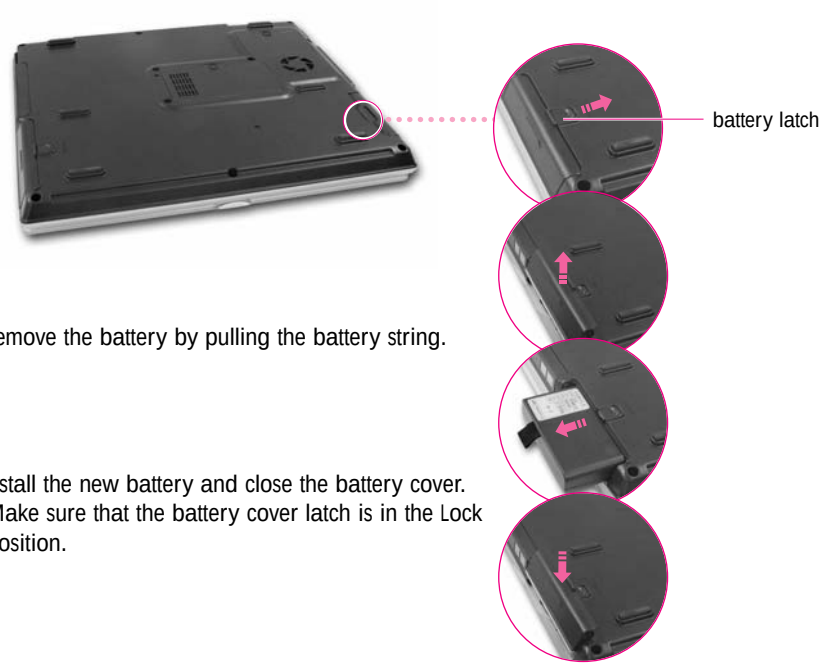
Please refer to the following instructions when running the computer on battery power without connecting the AC power.
This computer uses smart rechargeable Lithium-Ion (Li-Ion) batteries of which there are two types, the standard type and the long life type.

Caution

- Please read the instructions on the battery before use.
- Please refer to the system operation environment (Page A-2) of this manual and operate and store the battery at room temperature.

Replacing Battery

1. Shutdown system and close LCD.
2. Put the computer upside down on a flat surface.
3. While holding the battery cover latch in Unlock position, separate the battery cover.



4. Remove the battery by pulling the battery string.

5. Install the new battery and close the battery cover. Make sure that the battery cover latch is in the Lock position.

Checking the Battery Charge Status

You can check the battery charge status using one of the following two methods:

Method 1 : Pressing the <Fn>+< > key combination displays the remaining battery charge.

- Power supply status (Power Source)

  When operating on battery power

  When operating on AC power

- Remaining Battery Charge Level (Battery Level, %)

Method 2 : Remove the battery from the computer, and press the PUSH button on the battery to view the approximate remaining battery charge (%).

Note To configure the computer to emit alarm beeps when the remaining battery charge is low, click Start > Control Panel > Performance and Maintenance > Power Options Properties and configure accordingly in the 'Alarms' tab.

Note **Battery Warning**

You will hear an alarm when the remaining battery charge is under 10%. Connect the power cable or turn off the computer and install a fully charged battery.

When the remaining battery charge is under 3%, the computer automatically saves current work and turns off. This may be different according to the settings in Control Panel > Performance and Maintenance > Power Options > Alarms tab.

Increasing Battery Life

Adjust LCD Brightness

<Fn> + < > : Dim the LCD display brightness.

Use Power Saving Mode

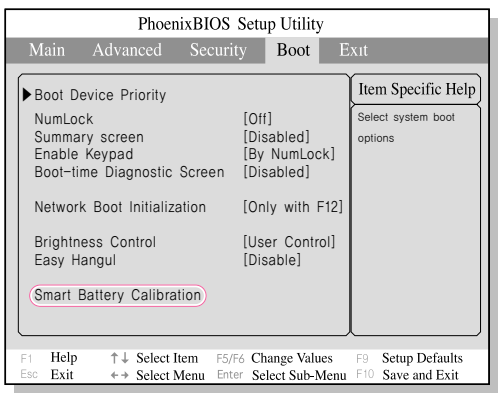
This function reduces power consumption when the system is not being used for a prolonged period of time.

Use Battery Calibration

When the battery is in continuous use without being completely charged or discharged, there may be a difference between the displayed battery charge and the actual battery charge, owing to the inherent characteristics of the battery.

Completely discharging the battery and fully charging it can correct this problem. Completely discharging the battery for this reason is called battery calibration. The procedure to calibrate the battery is described below.

1. Turn off the computer and disconnect the AC power.
2. Turn on the computer and press <F2> to enter into System Setup.
3. Select **Smart Battery Calibration** in the **Boot** Menu, and press <Enter> to start. The calibration process usually takes 3 to 5 hours depending on the remaining battery charge.



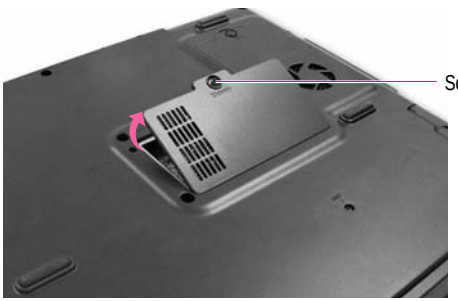
4. When the calibration process is complete and the battery is completely discharged, connect the AC power adaptor to fully recharge the battery.

Upgrading Memory

Your computer has one or more memory modules installed and a total of two memory slots available. Below is an explanation on how to remove the memory and replace it with a new one.

Note Before replacing the memory module, turn the system off completely. Do not replace the memory module when the system is in Rest Mode.

1. Using a screwdriver, open the memory-module compartment cover on the bottom of the system.



2. Push the memory module tabs outward to pop the memory module outward. Pull the module out at an angle of about 30°.

3. Align the new memory module connectors accordingly and slide it into the slot at a 30˚ angle.

4. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, push the module while pressing the memory module tabs outward.

5. Close and fix the memory-module compartment cover using a screwdriver.

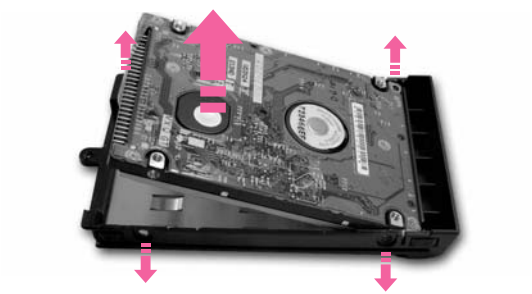
Replacing a Hard Disk Drive

The procedures for replacing the hard disk will be described below.

1. Turn off the computer and turn upside down.
2. Using a screwdriver, remove the screw securing the hard disk, and pull out the hard disk bracket.

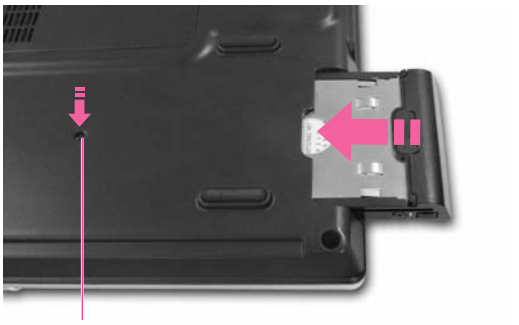
Hard disk Screw

3. Remove 4 screws, then remove the hard disk.



4. Install the new had disk in the bracket so that the label of the disk faces inside, then secure the 4 screws with a screwdriver.

5. Insert the bracket into the hard disk compartment, and secure it using the screw.



Hard disk Screw

Note **After replacing the hard disk**
Referring to 'Reinstalling Windows', reinstall Windows and, reinstall the drivers and programs referring to 'Reinstalling software'.

Using the Security Lock

The security lock is a device used to physically 'fix' the system when using it in a public place. The locking device needs to be purchased separately. The shape and methods of use may differ depending on the manufacturer. Please refer to the manual provided with the security lock for proper use.

Connect a security lock cable to a fixed object, and to the security lock port on the back of the computer.

Traveling with the Computer

- When traveling, keep the system and the AC adapter disconnected. Otherwise, it may affect the functions of the system.

- Make sure that the system is not pressed by a book or heavy objects. The LCD may get damaged.

- When traveling by plane, use a bag designed for notebook PCs and hand-carry the computer.

- Allow the computer and disks to pass through security X-rays but do not pass the computer and disks through metal detectors.

- Do not use the computer during take off and landing.

- Make sure the eject button of PCMCIA card slot is locked.

Chapter 6

Customizing your computer

This chapter provides information how to use the system setup, customizinig screen settings.

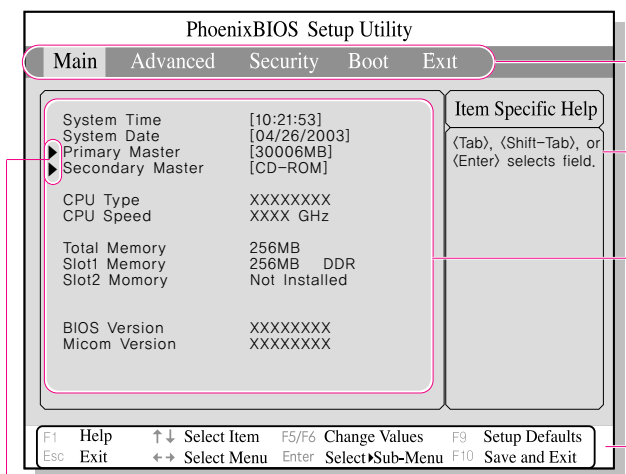
Using System Setup

System Setup is a utility that enables the computer environment to be changed to suit the user. System Setup is used when changing the system password, booting priority, or when adding new devices.
Please use extra care when configuring System Setup, as it may cause serious system error.

To enter System Setup

1. Turn on the computer.
2. When the booting screen appears, press <F2>.

3. The initial System Setup screen will appear in a moment.



Setup Menu

Help
Displays help information on the current selected item.

Setup Item

Navigation Keys
Use these navigation keys to view and change the System Setup settings.

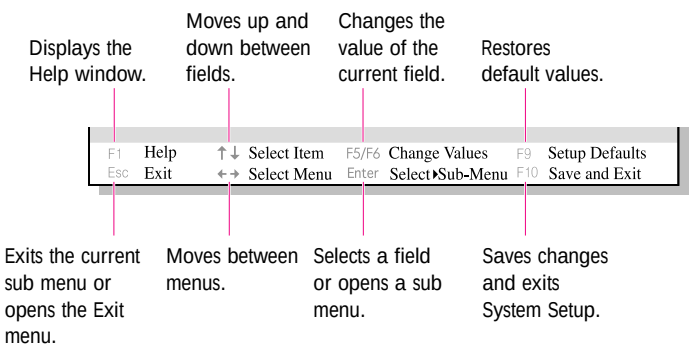
Sub-Menu
Press<enter> to display sub-menu.

System Setup Menus

Menu Items	Description
Main	Configures the basic system environment
Advanced	Configures OS and major chipset options of the system
Security	Configures system security options
Boot	Configures booting options
Exit	Exits System Setup

Note For more information on System Setup menus or options, please refer to Help on the right side of the screen.

System Setup Navigation Keys


Displays the Help window.
Moves up and down between fields.
Changes the value of the current field.
Restores default values.
F1 Help
Esc Exit
↑↓ Select Item
↔ Select Menu
F5/F6 Change Values
Enter Select▸Sub-Menu
F9 Setup Defaults
F10 Save and Exit
Exits the current sub menu or opens the Exit menu.
Moves between menus.
Selects a field or opens a sub menu.
Saves changes and exits System Setup.

Configuring the Password

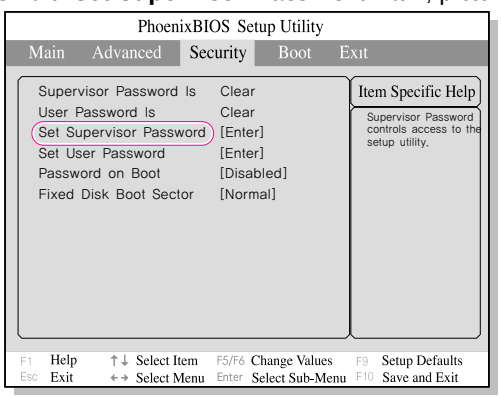
Setting the Supervisor Password

By configuring a supervisor password, you can restrict system access to authorized users only.

Note Do not lose or forget your password. If you have forgotten your password, contact the Samsung service center.

1. Select the **Security** menu in the System Setup. (To enter into System Setup, see Page 6-2.)

2. On the '**Set Supervisor Password**' item, press <Enter>.


PhoenixBIOS Setup Utility
Main Advanced Security Boot Exit
Supervisor Password Is Clear
User Password Is Clear
Set Supervisor Password [Enter]
Set User Password [Enter]
Password on Boot [Disabled]
Fixed Disk Boot Sector [Normal]
Item Specific Help
Supervisor Password controls access to the setup utility.
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select Sub-Menu F10 Save and Exit

3. Enter a password, press <Enter>, re-enter the password for confirmation, and press <Enter> again.

4. When a message confirming the password configuration appears in the [Setup Notice] window, press <Enter>.

Setting the User Password

You can configure user passwords so that other users can use the system.

Note

- Before activating a user password, a supervisor password must have been configured.
- Users can start the system with their user password, but cannot enter into the System Setup.
- Deactivating the supervisor password also deactivates the user password.

On the 'Set User Password' item, press <Enter>, and complete step 3-4 of Configuring the Supervisor Password.

Activating the Booting Password

Note

- Before activating the booting password, the supervisor password must have been configured.

Set the 'Password on boot' option to [Enabled].
From now on, you must enter the password to boot the system.

Deactivating the Password

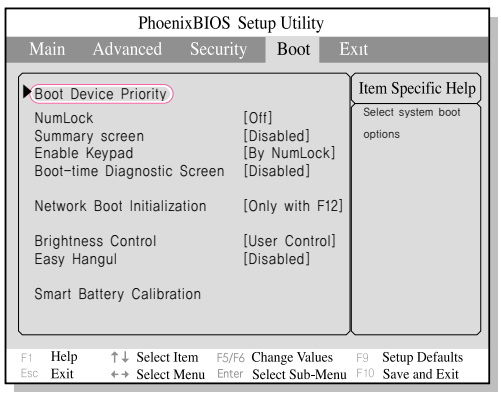
1. On the password to delete, press <Enter>. (e.g. supervisor password)
2. Enter the current configured password, and press <Enter>.
3. Leave the 'New Password' and 'Confirm New Password' field empty, and press <Enter> to deactivate the password.

Changing Booting Priority

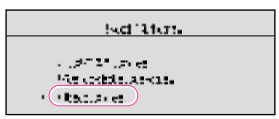
You can select the booting priority among the devices such as the hard drive, CD-ROM drive, etc. The following example describes how to configure the hard drive as the first booting device when the CD-ROM drive is configured as the first booting device by default.

1. Select the **Boot** Menu in System Setup.

2. Press <Enter> on **Boot Device Priority** item.



3. Use the < ↓ > key to move to the **Hard Drive** item, and press <F6> key until it is at the very top.



4. Press <F10> to save the changed configuration, and exit System Setup.
   Now you can boot the system with the hard disk drive as the first booting device.

Configuring Resolution and Color Depth

Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color quality displays more number of colors on your screen.

1. Press touchpad right button on the desktop, and click **Properties**.
2. Make changes on the **Settings** tab of the [Display Properties] dialog.

To change the number of colors displayed on a monitor, select an appropriate color quality.

To change your screen resolution, move the slider to select an appropriate resolution.

3. When you have completed configuration, click **Apply**.

Note

XGA models, configuring the Screen resolution to 1024x768, and the Color quality to Highest (32 bit) is recommended.

SXGA+ models, configuring the Screen resolution to 1400x1050, and the Color quality to Highest (32 bit) is recommended.

Using External Display Devices

Using external display devices such as a monitor, projector, TV, etc allows you to view screen images alternatively or simultaneously on each device. Additionally, you can extend the screen onto two display devices to use a larger workspace.Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

■ Switching Display Devices Using the Shortcut Key

You can watch the screen through either the LCD or an external display device, or you can even watch the screen through both the LCD and an external display device simultaneously.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system.
   To connect a TV, connect the TV to the TV output port of the system.
2. Press the <**Fn**> + < > key. Provided that an external display device is connected, the display option changes in LCD > CRT > LCD+CRT order whenever the key is pressed.

Note

When connected to multiple display devices, press the <Fn>+< > keys;

1. For an ATI Mobility 9000 IGP, the sequence LCD > CRT > LCD + CRT > Screen Off temporarily > LCD + TV > LCD is displayed. The TV-out feature is not independently available.
2. For an ATI Mobility Radeon 9700 (M11-CSP64), the sequence LCD > CRT > LCD + CRT > TV > LCD + TV > LCD is displayed.
   You cannot activate the LCD, CRT and television displays at the same time.

■ Configuring the Display Properties

In the Display Properties, you can configure detailed display settings. For example, you can configure the LCD to a primary device and the CRT to a secondary device by completing the following procedures.

1. Connect the monitor to the monitor port of the computer.
2. Press touchpad right button on the desktop, and click **Properties**.
3. In the [Display Properties] dialog box, click the **Settings** tab> **Advanced** > **Display** tab.

4. When only LCD is selected, click the red tab of CRT. Then the tabs of both CRT and LCD turn green. Now both display devices are selected. The LCD is configured to a primary display device, and the CRT is configured to a secondary display device. Click **OK**.

Configured to a primary display device

Configured to a secondary display device

Now you can view the same screen through the LCD and the CRT.

Note If the screen is not clear, adjust the screen resolution and the color quality. (P. 6-7)

You cannot configure more than one device to a primary display device. Since the screen display is supported on the basis of the primary display device, some func tions such as panel arrangement are not available for the secondary display device.

■ Using Dual View to View an Extended Screen

You can expand the screen into two display devices and work conveniently in separate workspaces.
In Dual View mode, you can select the screen resolution and color quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system.

   To connect a TV, connect the TV to the TV output port of the system.
2. Press touchpad right button on the desktop, click **Properties**, and then click the **Settings** tab.
3. Click the **monitor** '**2**' icon, select the '**Extend my Windows desktop onto this monitor**' check box, and then click **Apply**.

4. When you have completed this, click **OK** on the left of the Troubleshoot button. The primary display device (the LCD) is indicated as '1', and the secondary display device is indicated as '2'. Now you can use each of the two display devices as independent display devices.

1: Primary

2: Secondary

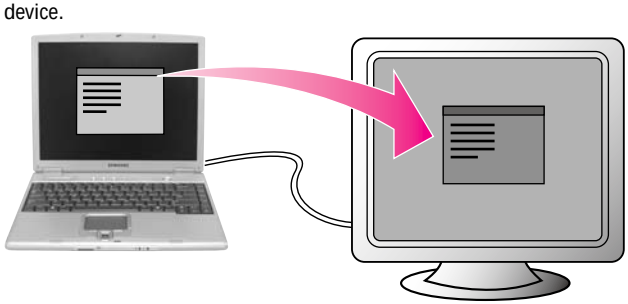
Note When using Dual View, only the LCD is configured as the primary display device.

Caution If the screen of the secondary display device is displayed at 640x480 pixels, with 256 colors, change the settings to the desired screen resolution and color quality in the [**Display Properties**] window.

■ Deactivating Dual View Mode

Click the **monitor** '**2**' icon, clear the '**Extend my Windows desktop onto this monitor**' check box, and then click **Apply**.

Note **To move a window between display devices in Dual View mode**
Click the title bar of the window in the primary display device (1, the LCD), and drag it to the secondary display device (2). The window moves to the secondary display device.



Checking for Viruses

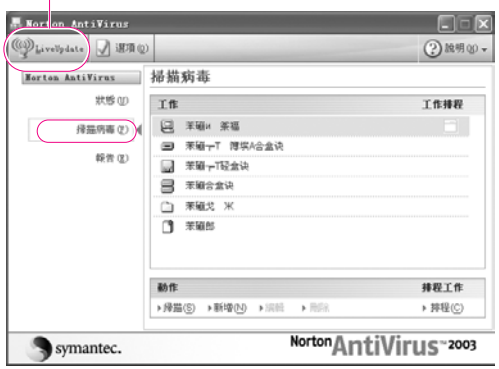
The Norton AntiVirus software is provided as the virus inspection program.

Note

When you first run Norton AntiVirus, the Norton AntiVirus Configuration window pops up. If you complete the configuration and your computer connect to network, you can download and install the latest updates via the network. When the live update is done, virus scanning starts automatically. To stop scanning, click on Stop.

If you didn't configure the Norton AntiVirus program, a security alert icon ( ) appears in the notification area on the right of the task bar. This indicates that the current security state of your computer is not secure. Configure the virus-scanning program to make the security alert icon disappear.

1. Select **Start** > **All Programs** > **Norton AntiVirus** > **Norton AntiVirus 2003**.
2. Click **Scan Virus**, select drive to inspect, and click **Scan**.



Vaccines for the latest viruses can be downloaded by connecting to Symantec's homepage.

3. If a virus is detected, select Automatic in Norton AntiVirus, and click **Next** to delete the virus.

Chapter 7

Recovering the Computer

This chapter provides recovery procedures using the System Recovery CD when the computer is not operating properly.

Restoring the System

Note This description is only for models running Window XP.

The System Restore function allows you to restore your computer to an earlier copy (called restore point), and restores the settings if a problem occurs.

The System Restore function is provided by Windows XP to enable the resolution of various problems without reinstalling Windows XP completely.

You can use System Restore in the following cases.

- The system files are deleted or damaged by mistake.
- The system is unstable or a problem occurs in a device driver.
- A problem occurs after changing system files such as the registry.
- A problem occurs after installing a new program.

Creating a Restore Point

Restore points are created at predetermined times and at times of significant system events such as when a program or a driver is installed. You can also decide when to create your own restore points.

Note There has to be more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

You are recommended to create a restore point when you have purchased a new computer and before installing new programs or device drivers. Before creating a restore point, check that the computer is operating properly.

The procedures to create your own restore point are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select 'Create a restore point', and than click **Next**.

3. In the **Restore point description** box, type a name to identify the restore point, and than click **Create**. A restore point has been created.

Returning your computer to an earlier restore point

The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

1. **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select 'Restore my computer to an earlier time', and click **Next**.

Caution Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

3. Select the desired restore date (①) from the calendar restoration and select the desired restore point from the list (②), and then click **Next**.

Note The date of the restore point is displayed in bold font.

4. Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.
5. After the restoration is complete, Windows restarts. In the [System Restore completed] dialog box, click **OK**. Your computer has been restored to the selected restore point.

Undoing the last restoration

The procedures to undo a restoration are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select 'Undo my last restoration', and click **Next**.
3. Confirm the restoration information to undo, and click **Next**. System Restore shuts down Windows and starts undoing the restoration.
4. After the undo restoration is complete, Windows restarts. On the [Undo the last restoration completed] dialog box, click **OK**. Your computer has been restored to the point prior to the last restoration.

Reinstalling Software

If you have reinstalled the Windows operating system, or the system and program do not operate properly, you can re-install the driver and program using the system software CD.

Note This computer is optimized for Microsoft Windows XP. Therefore, Windows drivers other than the ones included in the System Software CD are not provided.

Running the system software CD

Insert the system software CD into the CD-ROM drive. The initial screen appears automatically.

- **Standard Installation** : This displays a list of drivers or programs that are not currently installed on your computer from the system software CD provided.
  All necessary components are installed using the factory defaults.
- **Minimum Installation** : This displays the components (driver, Windows programs, etc) that, if not installed, may cause problems with the system performance. You can install only required components.
- **Custom Installation** : You can customize the installation of drivers and programs.

Installing drivers and programs

1. Click **Standard Installation** in the main window of the System Software CD. (Standard Installation is recommended)
2. The system is scanned to display the drivers and programs that need to be installed.
3. Click **OK**. The drivers and programs are automatically installed as factory defaults.

4. When done, restart the system.

Reinstalling Windows XP

If the Windows XP does not operate properly due to an error in the system, or if you have replaced the hard disk drive, you can reinstall Windows XP using the system recovery CD.

Note The following descriptions are for the model with a CD drive. For information about the model with a DVD drive, refer to P.7-9.

Caution With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software CD after reinstalling Windows XP with the system recovery CD.

Reinstalling Window may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data. Samsung Electronics is not liable in the case of data loss, please consult your warranty statement for clarification.

Note **When you have set a booting password**

You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next steps.

Reinstalling Windows

Explain Standard installation option as a standard.

1. Insert the system recovery CD into the CD-ROM drive.
2. In the initial screen, click **Standard installation**.

Standard installation : You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, reinstalling Windows may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data.

Quick Installation : This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.

3. The description for the standard installation appears. Click **Yes**.
   The installation starts, and the system will be restarted after a while.

Note **When Quick Installation is selected**,
Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

4. After the system has restarted, the message '**Press any key to boot from CD**' appears. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press <**Enter**>.

Note **What is partition configuration?**
Partition configuration is a function that devides the hard disk drive into one or several partitions. Note that changing the partition deletes all of the data on the hard disk drive.

5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press <**L**> on the keyboard.

Note If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

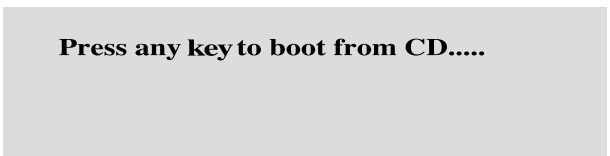
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XPinstallation screen will appear to proceed with the installation.
7. When the Regional and Language Options window appears, click Next.
8. When a window that requires your name and organization pops up, enter your name and the organization and click **Next**. In the Windows XP Professional edition, an additional window that requires thecomputer name and the administrator password appears. Enter **the computer name and the administrator password** and click **Next**.
9. When **the Date and Time Settings** window appears, click **Next**.
10. When the system restarts to display Press any key to boot from CD, do not press any key.

    When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install **the device drivers and applications** from **the system software CD**.

If You Cannot Run Windows

If you cannot run Windows, you have to boot the system with the system recovery CD, and reinstall Windows. If you boot the system from the system recovery CD, you can install Windows only with the user installation option. You cannot install with the standard installation option.

1. Insert the system recovery CD into the CD-ROM drive and start the computer.
2. If the following message appears on the screen, press any key from the keyboard.



Note This message appears only when the CD drive has booting priority.
If the message does not appear, configure the **CD drive as the first booting device** referring to the **Changing Booting Priority** in the User Guide.

3. Do not press any key at this time. After a while the partition configuration screen appears. To not change the partition, press **<Enter>**.
4. Select the desired file system (format).
   To maintain the current file system, press **<Enter>**.
5. Select the folder to install the Windows operating system. To delete the previous version of Windows and install in the current folder, press **<L>** on the keyboard.
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message “Press any key to boot from CD” is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
7. Follow the instructions of the Windows XP installation wizard to continue with the installation.

When the installation is complete, the computer will restart.
When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.
The system boots and the Windows and Windows Registration screen appears.
Register Windows, following the instructions to finish the Windows installation.
Remove the System Recovery CD and install the **device drivers** and **application programs** using **Standard Installation** from the **System Software CD**.

Re-Installing Windows

When Windows is not operating properly due to an error on the hard disk drive, you can easily reinstall Windows using the Samsung Recovery Solution Media.

Note The following descriptions are about the model with a DVD drive. For information about the model with a CD drive, refer to P.7-6.

Caution

Please backup your hard disk drive.
Samsung Recovery Solution formats your hard disk drive before installing Windows. Therefore, please backup important data onto a separate storage device before reinstallation.

When using a partitioned hard disk drive:
If there is insufficient free disk space for installing Windows (approximately less than 5 GB), Windows cannot be installed.

1. Insert the **Samsung Recovery Solution** media into the DVD-ROM drive and restart your computer.
2. When the **Press any key to boot from DVD**. . . message appears, press any key on the keyboard.
   After a while, the Samsung Recovery Solution Start screen appears.
3. Read the instructions on the Start screen and click the Start button to install Windows.

SAMSUNG
Welcome
SAMSUNG Recovery Solution
Samsung Recovery Solution is a Windows clean installation tool.
After Windows installation, applications and drivers should be installed additionally via "System Software CD [or System Software Media]"
Warning
Please backup any important data before running.
All data will be lost after the installation.
If you wish to backup your data, press Cancel now and exit.
Cancel
Start

4. The Windows installation will be performed. Installation will take approximately 15~20 minutes depending on the performance of the computer.

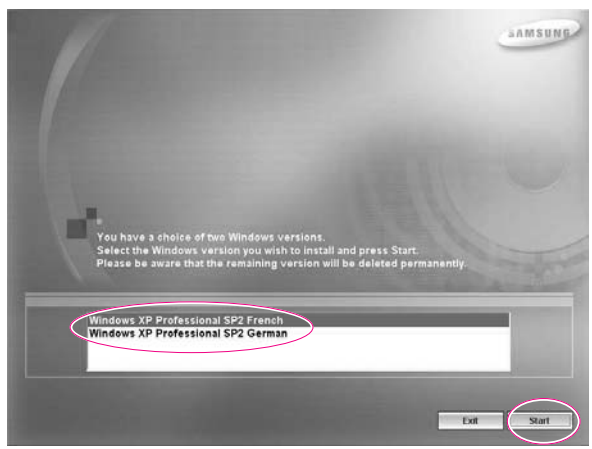
SAMSUNG
Windows installation in progress. Do NOT turn off the system.
Installation will take approximately 15-20 minutes depending
on the system performance.

Note

If the Select Windows version (language) screen appears instead of the Windows installation screen:

The **Select Windows version** screen may appear if you have formatted your hard disk drive. Select a **Windows version** according to the following procedures.

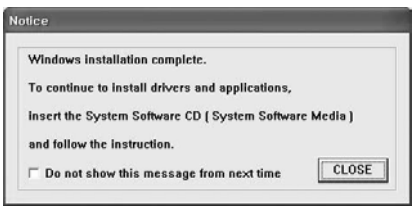
4-1 Select the **Windows version** you have used and click the **Start** button.


SAMSUNG
You have a choice of two Windows versions.
Select the Windows version you wish to install and press Start.
Please be aware that the remaining version will be deleted permanently.
Windows XP Professional SP2 French
Windows XP Professional SP2 German
Exit
Start

4-2 The Confirmation window appears. Confirm the selected Windows version and click the **Yes** button.

5. When the Windows installation is complete, the computer will automatically restart and the **Notice** window will appear.

   Insert the **System Software CD** into the DVD-ROM drive.


Notice
Windows installation complete.
To continue to install drivers and applications,
Insert the System Software CD (System Software Media)
and follow the instruction.
Do not show this message from next time
CLOSE

   After a short wait, the System Software CD Start screen will appear.

Note The drivers and applications from the System Software CD need to be installed. Windows cannot be used without them.

6. Select a menu from the System **Software CD Start screen**, and install the drivers and application programs.

   When the installation is complete, the computer will automatically restart and the Windows registration screen will appear.

Note For more information about the procedures to use the **System Software CD**, refer to the descriptions of 'P. 7-4 Re-Installing Software'.

If the System Software CD consists of 2 CDs

When the installation of the first CD is complete, the Windows registration screen appears. (See Step 7) Install the second CD after registering Windows.

7. When **Start Microsoft Windows** appears, click the **Next** button.

Note Register Windows referring to the descriptions of the '**Installing and Registering Microsoft Windows**'section of the Installation Guide.

If the **System Software CD** consists of two CDs, insert the second CD for program installation into the DVD-ROM drive after completing the Windows registration.

Q&A

This section provides information on possible problems, solutions and other references for system use.

Windows Related

Q1 The system does not shutdown properly.

A When the system does not shutdown normally, press and hold the Power button until the system manually shuts off. If the Power-Saving Mode is configured into the Power button, press and hold for more than 4 seconds to shut the system off. When the system is turned on after such manual shutdown, Scandisk will run to check errors in the system.

Q2 The system freezes during program operation

A1 There is an error with the program currently being used. Press the <Ctrl>, <Alt>, and <Delete> keys simultaneously and click 'End Task in the [Windows Task Manager] window.

A2 There is an error with the Windows OS. Reboot the system by using the Power button.

External USB Device-related

Q1 Some USB devices do not work properly.

A Some USB devices may not work properly or are not recognized by a PC due to an inherent flaw in their USB signaling properties.
It is recommended using USB devices with the acquired USB logo.
(Error-reported USB Devices: Ark TV, Com-26D8 Optical Mouse, WINGKEY Bluetooth Keyboard, AlphaCam, etc.)

Q2 Some USB Devices are represented by an "Unknown Device" message with an exclamation mark when the device is inserted into the USB port of the system or the system restarts from power-saving mode.

A Some USB devices that have unstable signal properties may sometimes not be recognized by a PC when the device is inserted into the USB port of the system or the system restarts from power-saving mode. In this case, remove the device and try inserting it again.

Display Related

Q1 The LCD screen is blank.

A Adjust the LCD screen brightness. Use the <Fn> + < >, <Fn> + < > keys.

Q2 The screen saver disturbs screen viewing during Media Player or video file operation.

A Under the Media Player Options, in Player > Enable Screen Saver During Use, uncheck the box and restart the player.

Q3 When the Dual View (extended monitor) feature of connecting to an external monitor is available in the Windows 2000/XP environment, setting the screen resolution of the external monitor to less than that of the LCD may cause it to not display correctly.

A When using the dual view feature, degrading the resolution of the external monitor when compared to the LCD may cause it to display incorrectly. Set the resolution of the external monitor to higher than or equal to that of the LCD.

Q4 The following may cause a temporary blinking or distortion on the screen.
(a changed resolution or display device, a removed AC adaptor or a system restart)

A In these cases, the system detects and examines which external device your video driver is associated with. During this inspection, the external display device may display a momentary blinking or distortion.

Q5 When I connect a projector, and change the setting to display screen image on both the LCD and the projector by pressing <Fn>+< > keys, screen is not displayed properly.

A Press <Fn>+< > keys once again.

Q6 The desktop momentarily appears as a broken image when zooming in or out of the Media Player screen when Media Player is running.

A Since zooming in or out of the Media Player screen changes the screen resolution, the desktop may momentarily appear as a 'broken image' during this operation.

Q7 Execution of a DOS command such as DIR causes the desktop to momentarily appear as a broken image when using the system in 2-byte character language DOS mode.

A This may happen when you have configured the display in such a way that the screen is displayed to both the LCD and CRT screens simultaneously. To avoid this, configure the screen as either LCD or CRT. (See "Using External Display Devices" (p.6-8).)

Q8 The 'Turn off monitor' function configured in the Power Management does not work while using the system in full screen DOS mode.

A The 'Turn off monitor' function may not work in full screen DOS mode. (See Page 5-2. Managing Power.)

Q9 DVD or MPEG movie only displays on the LCD screen.

A When using both the LCD and the CRT monitors to display a movie simultaneously, only one of the two is available.

1. Use the right touchpad button on the desktop and select Properties.
2. In the [Display Property] dialog box, click Settings > Advanced > Overlay and go to Clone Mode Option.
3. In the Overlay Display Mode setting tab, select "All Equal". Now you can see the movie on both the LCD and the CRT monitor at the same time.

Q10 When I connected a TV, some programs, such as Mem, do not run properly in Full-DOS Screen.

A When you are using a TV as display device, some programs, such as Mem, may not run properly in Full-DOS Screen. Run the program in DOS window mode.

Q11 When I pressed <Alt>+<Enter> keys to change to full screen mode while playing a music file in Windows Media Player, the sound may be stopped for a short period.

A When you maximize or restore down the Windows Media Player screen, the screen resolution is changed. Sound may be stopped for a short period while changing the resolution. Maximize or restore down the screen before playing an MP3 or MPEG file.

Modem Related

Q1 I cannot hear the modem sound.

A1 Check that the telephone line is properly connected to the modem.

A2 Check that the modem driver is installed properly.

1. Click **Start > Control Panel > Performance and Maintenance > System**.
2. Select **Hardware** tab **> Device Manager > Modems** in the **System Properties** window, and check if there is a yellow exclamation mark on the installed modem icon. If there is, delete the modem device driver and reinstall the driver, because the yellow exclamation mark represents a not properly installed driver.
3. If there is no yellow exclamation mark, double-click the installed modem, and click **Diagnostics** tab **> Query Modem** in the **Modem Properties** window to diagnose the modem.

No message in either of Command and Response in the **Diagnostics** tab means that the modem is not operating properly.
Diagnose the modem again after restarting the system or reinstalling the driver. (You have to exit all programs using modem in the advance of diagnostics of the modem).

A3 Although I can make a connection with the modem, I cannot hear the dial tone and modem connection sound. In this case check the following list:

1. Click **Start > All Programs > Accessories > Entertainment > Volume Control**.
2. Clear the **Mute** check box in the Telephone Line item.
   (Depending on the sound driver, it may be displayed as another name such as Modem, Phone, Mono. If there is no corresponding item, click **Options > Properties > Volume Control**, select 'Playback', and select the 'Telephone Line' under the '**Display the following volume controls**'. Click **OK**.)

Q2 I cannot make a call using an extension line.

A In general, the dial tone of a PABX or a digital phone switching system is not a continuous one, unlike that of trunk line.
Therefore, the modem may not make a call because the modem mistakes the dial tone from a PABX or a digital phone switching system as a busy tone.
In this case, complete the following procedures.

- **Using an AT command.**
  As an initialization command, use the command, ATX3.

Otherwise, enter the ATX3 command manually before making a call.

It can correct this problem by skipping the dial tone check step.

- **Configuring the Modem through the Control Panel.**
  1. Click **Start > Control Panel > Network and Internet Connections**
  2. Under **See Also**, click **Phone and Modem Options**.
  3. In the **Modems** tab, select the installed modem, and click **Properties**.
  4. In the **Modem** tab of the **Modem Properties** window, clear the '**Wait for dial tone before dialing**' check box.
  5. When the configuration is completed, click **OK**.

Q3 How do I use my modem when dialing from overseas?

A1 Check that the modem is correctly configured according to the current country. Because the values for communication may differ according to the country, you may not be able to connect via the modem due to an incorrect modem configuration.

1. Click **Start > Control Panel > Network and Internet Connections**.
2. Under **See Also**, click **Phone and Modem Options**.
3. In the **Dialing Rules** tab, click **Edit**.
4. In the **General** tab in the **Edit Location** window, select the current country from the **Country/region** radio box, specify the **Area code**, and click **OK**.

A2 Because the shape of the telephone plug may differ according to the country, you have to purchase and use the appropriate telephone plug for that particular country.

Q4 How do I receive a fax while the system is in power saving mode (Rest mode) (For Windows XP and 2000)?

A To receive a fax when the system is in power saving mode, and the operating system is Windows XP or 2000, configure the system as follows:

1. The automatic fax reception function of the fax program needs to be activated. (For more information, refer to the corresponding fax program manual.)
2. Click **Start > Control Panel > Network and Internet Connections**.
3. Under **See Also**, click **Phone and Modem Options**.
4. In the **Modems** tab, select the installed modem, and click **Properties**.
5. In the **Power Management** tab of the **Modem Properties** window, select the "**This device activates the computer in power saving mode**" check box, and click **OK**.

The above setting enables the modem to turn on the system and receive a fax when in power saving mode.

Wired LAN Related

Q <Wake On LAN> Function

A <Wake On LAN> is a function that activates the system in rest mode when a signal (such as **ping** or **magic packet** commands) arrives from network(wired LAN).

- **To use <Wake On LAN> function**

1. Click **Start > My Computer > My Network Places > View network connections**.
2. Click the right button on the touchpad over **Local Area Connection**, and select **Properties**.
3. Click **Configure...**, and select **Power Management** tab. Select '**Allow this device to bring the computer out of standby**', then click **OK**. Restart the system.

- If the system in rest mode is activated when there is no received signal, use the system after disabling <Wake On LAN> function.
- Connecting wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to '**Disable**' to use <Wake On LAN> function.

Wireless LAN Related

For basic procedures for using a wireless LAN, refer to (P. 4-9) “Configuring the Network Environment Settings for Wireless LAN Network (WLAN)”.

Q1 The Wireless LAN device is operating properly, but I cannot connect to the Internet or to another computer.

This is due to an inappropriate configuration. Check the following check lists:

A1 If you are using a computer-to-computer (Ad Hoc) network connection, check that the name of the configured network (SSID) is correct. The network name (SSID) is case sensitive.

A2 If you are using a network key (encryption key), you have to use the same network keys for an AP (Access Point) and a computer-to-computer network (Ad Hoc). The network key of the AP is configured in the AP management program. Ask your network administrator for more detailed information.

A3 Check that the device driver is properly installed. If the driver is not properly installed, you will find a yellow exclamation mark on the network icon by clicking **Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters > Wireless LAN adapter**. If there is a yellow exclamation mark, please reinstall the device driver with the system software CD.

Q2 The signal strength is excellent, but I cannot connect to the network.

Even if the signal strength is excellent, the network connection may not operate properly if the TCP/IP properties are not properly configured, or the network key (encryption key) is incorrect.

A1 Check that the TCP/IP properties are configured properly. When you connect to an AP, click the **Wireless Network Connection** icon ( ) on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows. (e.g. 169.254.xxx.xxx)
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.

A2 Referring to A2 of Q1, check that the network key is correct.

A3 Referring to Q4, check that AP is operating properly.

Q3 I cannot share an Internet connection.

A1 It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.

A2 Check if the connection between the network adapters is configured to bridge. If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.
A bridge connection is created when you ran Network Setup Wizard from the [Network Connections] window, and selected both the internal connection adapter and another adapter in the wizard.

Q4 I cannot connect to the AP.

Checking the computer settings

A1 Check that the wireless LAN function of the computer has been enabled as follows. If the function is disabled, enable the wireless LAN function.

- For Windows XP, select Start > Control Panel > Network Connections, and check that the Wireless network connection is set to 'Enable'.

  If you cannot search for available networks in the Status window of the Client Manager program when using the Agere 11b wireless LAN program, select Activate Wireless Network from the File menu.

  When using the Samsung 11g wireless LAN program, check that the "Turn On Radio Signal" message is displayed at the bottom of the Diagnostic tab of the MagicLAN Utility. If the message is displayed, click the button to activate the Wireless LAN. If you have properly activated the function, the "Turn Off Radio Signal" message will be displayed.

- If the Wireless LAN button exists, check if the Wireless LAN button is turned on. (See P.1-9 Using the Keyboard.)

A2 Click the Refresh button to search for AP's again. (A link to the Refresh button is required)

A3 Check that the same network key (encryption key) is configured on both the AP and the computer. A network key is an encryption key to encrypt data between the AP and the computer and manual configuration of the network key is recommended.

A4 Move the computer to another location. As the reception quality of a radio may vary according to the location of the radio, the wireless communication quality may be affected by the location of the computer. In addition, close distances (less than 5m) between wireless equipment, especially an AP, may result in poor wireless communication quality.

A5 Check that the wireless LAN card is recognized by the computer.
"The current wireless network card driver not exist. Cannot communicate"message appears in the notification area, when the card has not been properly recognized. This may occur due to an improperly installed driver, or a wireless LAN card error. Please reinstall the driver. If you are using Windows 2000, check that the Turn on/Turn off Radio is configured to "Turn on" in the General tab of the PROSet program.

Checking the AP settings

For procedures to configure the AP settings, refer to the User Guide supplied withthe AP.

A6 Check that the environment is appropriate for using a wireless LAN. Connecting to a wireless LAN may be affected by the environment and the distance from an AP. Obstacles such as walls and doors affect the communications quality of a wireless LAN. Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.

A7 Check that the AP is operating properly. If the AP is not operating properly, turn it off and then turn it on again after a short pause. Check that the latest firmware version of the AP is installed. (For detailed information on the firmware of the AP, ask your AP manufacturer or product provider)

A8 Check that the AP is properly connected to the network. Connect the network cable from the AP to the computer and check that the cable network is operating properly.

A9 Check that the network key (encryption key) is configured correctly. If data communication is not available, even though the wireless connection is normal when the Automatic password converting function (Passphrase function) is selected, enter the network key manually (encryption key).

A10 Check the settings of the AP as follows.

- When there are a number of AP's, check the channel configuration of the AP's. Using adjacent channels for neighboring AP's may cause radio interference. Configure the AP's and avoid adjacent channels. (e.g. use Ch1, Ch5, Ch9 and Ch13)
- When the SSID option of an AP is configured to "Hide", you cannot search for that AP An SSID (Service Set ID) is a name for distinguishing a wireless LAN from another wireless LAN.
- Using long preamble is recommended. Preamble is a signal for synchronizing data transmission. Although some types of AP support short preambles, using a short preamble may cause a compatibility problem.
- Using a fixed IP address is recommended.
- Because Static Channel Selection is more stable than Auto Channel Selection, using Static Channel Selection is recommended. Using functions such as Block Any and Any Connection Block are not recommended. Although the function blocks the Network Connection of the client when the network name is Any or Blank, this may cause a compatibility problem.
- The above recommendations are for a general environment. The settings may differ depending on the wireless network environment.

Q5 In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.

A1 Check that the Wireless LAN operating LED is on. (See P.1-11 Status Indicators.)

A2 Check that an additional wireless LAN program has been installed. Since Windows XP provides a wireless communication service using the Wireless Zero Configuration (WZC) service, an additional wireless LAN program is not required for Windows XP. In some cases, an installed wireless LAN program configures the Available Wireless Networks window of the WZC service in Windows XP to 'not use'. Exit the wireless LAN program and check again.

A3 Initialize the device driver.

Click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters, and select the wireless LAN adapter. Right-click the network adaptor and select 'Disable'. Then rightclick over the network adaptor and select 'Enable' after a short wait to check that the device is operating properly.

A4 Right-click the My computer icon, and select Manage. When the Computer Management window appears, double-click Services and Applications on the left, and then click Services from the sub menu tree. Select the Standard tab in the right pane, double-click Wireless Zero Configuration and check that Startup Type is configured to Automatic, and the Service status is Started.

Q6 When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.

A1 Click the Refresh button to search for AP's again. (A link to the Refresh button is required).

A2 Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected through a computer-to-computer (Ad Hoc) network should be configured so that their IP addresses are within the same subnet range.

- If the IP address is configured to DHCP (Obtain an IP address automatically) in TCP/IP properties, IP address is configured within the same subnet range automatically.
- If the IP address is configured to static IP in TCP/IP properties, select **Use the following IP address** in the TCP/IP properties of the wireless adapter, configure IP address:10.0.0.1~10.0.0.254, and Subnet mask: 255.255.0.0, and then try again.

Q7 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.

A You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

Q8 The wireless LAN does not operate properly when there are other products operating in the 2.4GHz band.

A Therefore some channel interference may happen when there are other devices using the same frequency band such as a wireless video transceiver, a microwave oven, etc. If other products cause channel interference, changing the AP channel is recommended. Since the IEEE802.11g device operates in hybrid mode when there is an IEEE 802.11b device in operation, the data rate might decrease.

Q9 An established wireless LAN connection is disconnected after 2~3 minutes, and the connection is not recovered.

A1 This may be caused by channel interference. Change the channel of the AP, and reconnect.

A2 Selecting the "Use IEEE 802.1x network authentication" option in Windows XP when IEEE 802.1x authentication is not used, may cause this phenomenon. Check the properties of the AP in the wireless network settings. If the 'Use IEEE 802.1x authentication in this network' option is selected, deselect the option on the Authentication tab.
For more detailed information about authentication server, ask your network administrator.

A3 If the AP is configured to 'Use network authentication (Shared Key)' If the AP is configured to authentication shared mode, all computers to be connected should be configured as follows:

- If you are using Windows XP, select network authentication(shared mode) in the wireless network settings.
  Click Start > Control Panel > Network and Internet Connections > Network Connections. Right-click the Wireless Network Connection icon, and click View Available Wireless Networks > Advanced. In the Wireless Networks tab, select an AP in the Available Networks field and click Configure and select 'Network Authentication (Shared Mode).
- When using the Agere 11b wireless LAN program, check that Shared Key Authentication has been selected in the Security settings window of the Wireless LAN program Client Manager. For more network authentication procedures, ask your AP (Access Point) administrator.

  For more network authentication procedures, ask your AP (Access Point) administrator.

Q10 Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.

A It will be displayed properly when you finish the profile wizard. It dose not affect the program operation.

Q11 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.

A You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

Q12 After PROSet is installed, The "AEGIS Protocol (IEEE 802.1x) v2.2.1.0" appears in the [Local Area Connection Properties] window.

A The AEGIS Protocol is a security authentication protocol that is automatically installed when PROSet is installed and does not affect the operation of other programs.

Q13 Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.

A This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.

Game/Program Related

Q1 3D game is not executed, or some functions are not working.

A Change the graphic setting of the game to '2D' or 'Software Renderer', then execute the program again.

Q2 I launched a game right after installing it, and the game is not executed.

A This problem may occur when the game is not compatible with Windows XP. Launch the game again, and it will be executed properly.

Q3 When playing a game, it only runs in small screen format.

A To run a game in full screen mode, change the settings in the following way;

1. Use the right touchpad button on the desktop and select Properties.
2. In the [Display Properties] dialog box, click on Settings > Advanced and go to Display tab.
3. Press the Panel button and select Expand Image to Flat Display. Then Click OK.

Q4 While playing a 3D game, I tried to change display devices using <Fn> + < > keys, then the system does not operate.

A When you use <Fn> + < > keys while playing a 3D game, a system error may occur. Do not use <Fn> + < > keys while playing a 3D game.

Q5 <Fn+ > Key combination does not work.

A While displaying video of VCD or MPEG, or the display setting is Dual View, you cannot toggle display devices. Also the installation of NetWare Client 32 program disables the function of <Fn+ >.

Q6 While running a game, <Fn>+< > keys may not work or screen may not be displayed properly when the keys are pressed.

A While running Direct3D game, display device configuration keys do not work to maintain the system stability. Since display device control varies depending on the type of display devices in some games, the screen may not displayed properly. Use <Fn>+< > keys before starting a game. Do not press the keys while running a game. (It may happen while running Harry Porter and the Chamber of Secrets, Warcraft 3, Unreal Tournament 2003, Starcraft, Quake 3, Soldier of Fortune 2, Heroes of Might and Magic 4, etc.)

Q7 Running speed of a game is too slow or fast.

A Change the setting of Power Schemes to '**Always On**'.

(Click **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab, then configure the **Power schemes** field to '**Always On**'.)

Q8 Pressing <Fn>+< > keys while running a game may cause abnormal operation of the system.

A Do not press <Fn>+< > keys while a game is running, because it may cause a system error.

Q9 Some part of a game image is not displayed or is displayed in black.

A This may happen when running a game designed for DirectX 8.1, such as NHL 2003, MVP Baseball 2003, etc.

Q10 The screen may not be displayed properly in some games.

A In some games including Harry Potter and Sorcerer's Stone and Harry Potter and the Chamber of Secrets, the screen may not displayed properly when you set the scree Gsolution to 1024x768 and color quality to 32 bits.

Play these games in screen resolution - 1024x768 and color quality - 16 bits.

Q11 The screen is severely interrupted in some games.

A In 3D games, the texture data needed in 3D screen presentation are stored in the system memory. When the system memory is not enough, the data is stored in the hard disk and transferred to system memory when the data is needed. In some games, the screen may be interrupted during this process.

Lower the game resolution or texture image quality. (For example: Delta Force Black Hawk Down, Medal of Honor, Battle Field 1942)

Security Center

Q1 To change the popup window display settings when connected to the Internet.

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

A1 To display most of the popup windows when connected to the Internet:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, clear Block pop-ups.

A2 To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

A3 To display popup windows from a particular site:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.
3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.
4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing. When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.

Q2 When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer"or "This site might require the following ActiveX control" below the address bar.

A Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly. In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

Q3 When you see a Windows Security Alert icon appear on the right part of the task bar.

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

A1 Set up the Windows Firewall. When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.

1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.
2. From the General tab of Windows Firewall, select ON (recommended).
3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.

A2 Set up Windows Automatic Updates.
This automatically downloads and installs critical updates via the Internet to keep your computer up to date.

1. Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.
2. From general tab of Automatic Updates window, select Automatic (recommended).

A3 Keep your computer current with the latest virus updates. (ex: Norton Antivirus)
Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon. When you first use or install Norton AntiVirus for the first time, follow the Registration Wizard steps to configure the registration settings. To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.

A4 Two virus scanning programs on one computer may cause system conflicts. Remove one of the programs from the system.

A5 If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.
Check the following programs which Windows can detect and select one from the list.
A list of anti-virus programs that Windows can detect:

- Symantec Norton Anti-Virus
- NetworkAssociates (McAfee)
- TrendMicro
- ComputerAssociates
- Panda
- Kaspersky
- Ahnlabs (AhnLab)

Note The list is subject to change. Visit the Web site (www.microsoft.com) regularly to check the latest list.

Appendix

Appendix

System specifications, software types and safety instructions are provided here.

System Specifications

The following is the basic hardware specification for the purchased product. Variations may exist depending on the model type.

Item	Specifications	Remarks
CPU	Intel Pentium M 1.4~1.8GHz / (Banias/Dothan) Intel Celeron M 1.3~1.5GHz	
Cache Memory	512KB(Celeron M) / 1MB(Banias) / 2MB(Dothan)	
Main Memory	128/256/512/1024 MB DDR SDRAM, 2 DDR socket	Max 2GB
Main Chipset	ATI RC300MB + IXP150	
Hard disk drive (HDD)	UltraDMA 100, S.M.A.R.T 9.5mmH	
CD Drive	CD-ROM drive, DVD-ROM drive, CD-RW/DVD-ROM Combo drive, DVD-Dual drive, DVD-SuperMulti Drive	Optional
Graphics	ATI Mobility 9000 IGP(Internal) ATI Mobility Radeon 9700 (M11-CSP / External)	Optional
Sound	Chipset : AD1981B(AC97 CODEC)	
Network Interface	Modem: V.92 Modem Wired LAN: BroadCom BCM4401KQL Wireless: Agere Hermes2, Samsung Electro-Mechanics SWL-2700m, Atheros 1 chip	Optional
PCMCIA Slot	Type I and II Compatible	
Ports	Monitor, USB 2.0 (x4), Modem (RJ-11), Wired LAN (RJ-45), TV Out (S-VHS), Microphone, Headphone	
Dimensions (mm)	330.5 x 278.0 x 34.7~40.8	W x D x H
LCD Panel Size	14.1" XGA / 15" XGA / 15" SXGA+	Optional
Weight (Kg)	2.79Kg(15"XGA Internal Graphics)	
Battery	Li-Ion Smart Battery	
Operation Environment	Temperature (storage) : -5 ~ 40°C (operation) : 10 ~ 32°C Humidity (storage) : 5% ~ 90% (operation) : 20% ~ 80%	
Operation Voltage	100 ~ 240 VAC	
Frequency	50 ~ 60 Hz	
Input/Output Power	60W	
Output Voltage	19.0 V / 3.16A	

* Please refer to the product catalog or consult your product provider for availability when purchasing optional accessories for this system.

Wireless LAN Specifications (Optional)

Agere Wireless Mini-PCI Card Device

Product Specification

Item		Detailed Specifications
Physical Specifications	Dimensions	(Width X Height) 59.75 X 50.95 mm
	operation temperature and humidity	Same as system operation
		Temperature: 0°C ~ 70°C Humidity: less than 85%
Power Specification	Power Saving Mode	135mW
	Receiving Mode	1.0W
	Transmission Mode	1.6W
	Power	3.3V
Network Specifications	Compatibility	IEEE 802.11b(DSSS) Mini-PCI Rev 1.0
	Operating System	Microsoft Windows XP, 2000 - NDIS5 Miniport Driver
	Media Access Protocol	CSMA/CA (Collision Avoidance) with Acknowledgement (ACK)
	Security	Wired Equivalent Privacy support (WEP) 64bit /128bit *WPA

* The equipment complies with Wi-Fi wireless LAN security specifications of WPA (Wi-Fi Protected Access). To connect to a wireless network using WPA, the additional installation of certificates is required depending on the network connection environment. But environment is not supported in Windows 2000 WPA. For more information, ask your network administrator.

RF Specifications

R-F Frequency Band	2.4GHz (ISM band)			
Support Channels	1~13 channel			
Device	Transceiver			
Modulation Scheme	Direct Sequence Spread Spectrum (DSSS) CCK for high and mid transmission rate DQPSK for standard transmission rate DBPSK for low transmission rate			
Standard Output Power	5 mW			
Transmission Rate*	High speed	MidSpeed	Standard	Speed Low Speed
	11 Mb/s	5.5 Mb/s	2 Mb/s	1 Mb/s
Antenna Type	2ea internal antennas (main and aux)			

* The data rate may differ from the real data transmission rate.

SAMSUNG SWL2700M 11b/g Mini-PCI WLAN Adapter Device

Product Specification

Item		Detailed Specifications
Physical Specifications	Dimensions	(Width X Height) 59.75 X 44.70 mm
	operation temperature and humidity	Same as system operation
		Temperature: 0°C ~ 55°C Humidity: 95%
Power Specification	Power Saving Mode	11g: 20mA 11b: 20mA
	Receiving Mode	11g: 270mA 11b: 235mA
	Transmission Mode	11g: 480mA 11b: 450mA
	Power	3.3V ± 5%
Network Specifications	Compatibility	IEEE 802.11g, IEEE 802.11b
	Operating System	Microsoft Windows XP, 2000
	Media Access Protocol	CSMA/CA (Collision Avoidance) with Acknowledgement(ACK)
	Security	Wired Equivalent Privacy support (WEP) 64bit / 128bit *WPA, *CCX

* The equipment complies with Wi-Fi wireless LAN security specifications of WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXensions).To connect to a wireless network using WPA and CCX, the additional installation of certificates, or the MagicLAN5 Utility is required depending on the network connection environment. For more information, ask your network administrator.

RF Specifications

RF Band	2.4 GHz
Support Channels	1~13 channel
Device	Transceiver
Modulation Scheme	11b Mode: DSSS 11g Mode: OFDM
Standard Output Power	MAX 10 mW
Transmission Rate*	**11g mode: 54, 48, 36, 24, 18, 12, 9, 6 Mbps, Auto Fallback function
	11b mode: 11, 5.5, 2, 1, Auto Fallback function
Antenna Type	2ea internal antennas (main and aux)

* The data rate may differ from the real data transmission rate.

** 11g mode is supported only when device is connected with an IEEE 802.11g device. (e.g. Access Point supported IEEE 802.11g)

Atheros Wireless Network Device

Product Specification

Item		Detailed Specifications
Physical Specifications	Dimensions	(Width X Height) 59.75 X 44.70 mm
	operation temperature and humidity	Same as system operation
		Temperature: 0°C ~ 70°C Humidity: 95%
Power Specification	Power Saving Mode	11g:21mA 11b: 21mA
	Receiving Mode	11g:250mA 11b:210mA
	Transmission Mode	11g: 380mA 11b:400mA
	Power	3.3V
Network Specifications	Compatibility	IEEE 802.11g, IEEE 802.11b
	Operating System	Microsoft Windows XP, 2000
	Media Access Protocol	CSMA/CA (Collision Avoidance) with Acknowledgement(ACK)
	Security	Wired Equivalent Privacy support (WEP) 64bit / 128bit *WPA, *CCX

* The equipment complies with Wi-Fi wireless LAN security specifications of WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXensions).To connect to a wireless network using WPA and CCX, the additional installation of certificates, or the Atheros Client Manager is required depending on the network connection environment. For more information, ask your network administrator.

RF Specifications

RF Band	2.4 GHz
Support Channels	1~13 channel
Device	Transceiver
Modulation Scheme	11b mode: DSSS, CCK 11g Mode: OFDM
Standard Output Power	MAX 10 mW
Transmission Rate*	**11g mode: 54, 48, 36, 24, 18, 12, 9, 6 Mbps, Auto Fallback function
	11b mode: 11, 5.5, 2, 1, Auto Fallback function
Antenna Type	2ea internal antennas (main and aux)

* The data rate may differ from the real data transmission rate.

** 11g mode is supported only when device is connected with an IEEE 802.11g device. (e.g. Access Point supported IEEE 802.11g)

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Safety Instructions

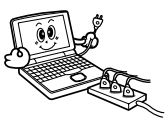
Instructions for Setup

- **Set up the system on a stable work surface.**
  If the system is dropped it may be damaged or it may inflict injuries on the user.

- **Do not use loose power outlets or damaged power cables.**
  There is a danger of electric shocks or fires.

- **Set up the system in a clean, dry and airy place.**
  If the system overheats, it may be damaged or it may cause fires.

- **Use standard power voltage.**
  High-voltage may result in product damage or cause fires.



- **Use grounded power outlets designed for computers.**
  A grounded power outlet prevents electric shock from electricity leakage.

- **Set up the system away from magnetic objects.**
  Contents of the hard disk drive may be deleted or the color of the monitor may be permanently distorted.

- **Dispose of moisture-reducing agents and plastic packaging properly.**
  Consumption of moisture-reducing agents and placing plastic packaging over the head is fatal, especially for children.

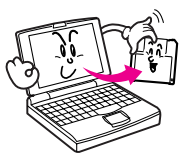
Instructions for careful handling

- **Handle with care so as not to damage the data in the hard disk.**
  - Since the hard disk is fragile and sensitive to external conditions, it may be damaged from temperature changes or impact during operation. Take extra care to prevent such damages.
  - Loss of data due to external conditions or carelessness during use is the user's sole responsibility and the manufacturer shall not be held liable for any compensation.

In order to minimize damages from data loss, please backup data at all times.

Cases when the hard disk and data may be damaged:

- External impacts while separating from or installing into the computer may cause disk or data damage.
- Power failure during hard disk operation resulting in resetting the computer may cause disk or data damage.
- Execution of delete (DEL) or format (FORMAT) commands by mistake may cause loss of data.
- Virus infection may cause unrecoverable loss of data.
- An abrupt power cut during program operation may cause disk or data damage.
- Moving the computer, or impacts to the computer during hard disk operation may cause data loss or bad sectors on the hard disk.



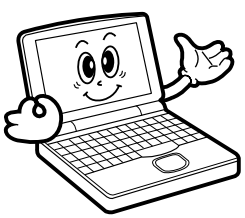
- **Be sure to make backup copies of important data.**
  The Manufacturer is not liable for lost data.
- **Turn on peripheral devices before, turning on the computer**
  Otherwise damages may occur.
- **Turn off the computer before turning off other peripheral devices.**
  Otherwise damages may occur.
- **Do not touch the modem, telephone lines and exposed electrical terminals during a thunder storm**
  There is a danger of electric shocks or fires.
- **Before disassembling the system, turn the power off and disconnect the power cable.**
  There is a danger of electric shocks.

- **Use only authorized parts and do not disassemble, repair or modify the computer unless at an authorized dealer.**
  Use authorized service centers as the system may be damaged.

- **Do not touch the power strip with wet hands.**
  There is a danger of electric shock.

- **Place the computer away from heat devices (such as heaters).**
  It may damage the system or cause fires.

- **Clean with cleaners specifically for computers**
  Do not use benzene, paint thinner, or alcohol to clean the computer. It may damage the product.



Customer Service Center

General Enquiry Hotline: 2862-6001
Technical Support Hotline: 2862-6406
E-mail: service@sehk.samsung.com

Web Site:

http://www.samsungelectronics.com.hk

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